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Organizational Social Capital And Perceived Performance Of Drug Law Enforcement Departments: A Case Study In Turkey

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**ORGANIZATIONAL SOCIAL CAPITAL AND PERCEIVED PERFORMANCE OF
DRUG LAW ENFORCEMENT DEPARTMENTS:
A CASE STUDY IN TURKEY**

by

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A dissertation submitted in partial fulfillment of the requirements
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ABSTRACT

Supply reduction efforts by drug law enforcement departments are a significant factor in improving the effectiveness of drug control policies. As with other public organizations, the performance of drug law enforcement departments is one of the most important concerns for policy makers. Therefore, improving the performance of these departments is crucial in order for governments to constrict illegal drug markets and prevent illegal drug distribution. The literature suggests that social capital may have significant implications for policy makers and practitioners in terms of enhancing organizational performance.

Social capital has recently been examined at the organizational level. It may contribute to organizational effectiveness by increasing motivation, solving coordination problems, facilitating information flow between individuals and organizations, and developing knowledge within organizations. Because of the nature of the work, drug law enforcement departments or agencies require information sharing, cooperation, and motivation, all possible derivatives of social capital.

Using a measurement model of organizational social capital, this study examines relationships among three dimensions of organizational social capital. The influence of social capital on the perceived performance of drug law enforcement departments is investigated using structural equation modeling. Possible correlations among these dimensions or domains of organizational social capital are also empirically tested.

Using survey data from 12 city law enforcement departments in Turkey, this study examines three social capital dimensions: (1) the structural dimension, concerning the extent to which officers within a department informally interact with each other; (2) the relational

dimension, referring to the normative qualities of relationships among officers, such as trust and reciprocity; and (3) the cognitive dimension, reflected by shared language, shared interpretation, and shared vision.

Four research hypotheses were tested and supported by the statistical results. The study's findings indicate that the relational and cognitive social capital variables have a direct and positive relationship with the perceived performance of drug law enforcement departments. Relational and cognitive social capital, as latent constructs, were shown to have a strong relationship with organizational performance. Structural social capital, however, does not have a direct relationship with but may indirectly influence performance. This result indicates that structural social capital may influence organizational performance only indirectly, through its joint influence with two other social capital domains. On the other hand, strong and positive intercorrelations were found among the three dimensions. The results suggest that social capital is essential for drug law enforcement departments because police officers who know, understand, and trust each other are more likely to work together efficiently and effectively towards achieving organizational performance.

According to the findings, informal structures shaped by informal relations among officers within the departments may also be an important factor for organizational performance. Investing in the development of social interactions and networks and building trust within organizations is important in order for administrators to improve organizational performance. The results of this conceptually grounded and empirical study suggest that drug law enforcement departments or agencies should pay close attention to promoting social capital among officers in order to fight effectively against drug trafficking.

ACKNOWLEDGMENTS

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1. INTRODUCTION

1.1. Statement of the Problem

Drug control is one of the most important public policy issues worldwide for policy

makers because drug abuse has tremendous economic and social consequences for countries. The

fact that drug abuse threatens society as a whole by creating victims and diminishing quality of

life constitutes a social cost. Economically speaking, drug abuse increases health care system

costs (e. g., via overdose deaths, emergency room visits, and treatment), costs for the criminal

justice system, and costs associated with lost productivity (Krizay, 1986; Rice, Kelman, Miller,

& Dunmeyer, 1990). Therefore, a great majority of countries in the world consider drug control a

policy priority. According to the 2002 National Drug Control Strategy of the White House Office

of National Drug Control Policy (ONDCP), the total cost of drug abuse to American society is

approximately $160 billion a year (Perl, 2003). Many studies indicate that Turkey is one of a

number of countries that have increasingly suffered from drug abuse and drug trafficking,

particularly during the last three decades (Buker, 2006). Since no general-population survey on

drug abuse has been conducted, it is difficult to estimate the actual number of drug addicts in

Turkey. It is, however, reported that the number of drug-related arrests in Turkey has

dramatically increased in recent years (TNP, 2007).

Turkey is located on one of the most actively used drug trafficking routes—called the

Balkan Route—between Asia and Europe. This route enables the delivery of illegal drugs

produced in Afghanistan to Europe and also permits the delivery of cocaine and synthetic drugs

produced in European countries to the Middle Eastern countries (Berry et al., 2003; Block, 2001; UNODC, 2003).

In addition, according to the Report of Smuggling and Organized Crime (TNP, 2007), drug trafficking is one of the primary financial sources for major terrorist organizations such as the PKK (Kurdistan Workers Party). Guiding the development of operational strategies implemented by law enforcement agencies, Turkey's drug control policy relies to a large extent on drug law enforcement efforts. Therefore, improving the performance of drug law enforcement departments is a major concern for the Turkish government in their desire to constrict the illegal drug market, prevent illegal drug distribution, and disrupt drug trafficking.

The success of the supply-side strategy depends largely on the extent to which drug law enforcement departments are effective. Although some domestic and international reports suggest that Turkey is successful in preventing certain types of drug trafficking (TNP, 2004), drug trafficking is still a serious problem in Turkey (UNODC, 2003). In particular, cocaine and synthetic drug trafficking have emerged as problems in recent years. According to Icduygu and Tokdas (2002), contemporary trafficking and trading methods have made fighting this problem much more difficult for law enforcement organizations. The drug trafficking threat is asymmetrical in nature and forces organizations to change how they respond to this type of crime. Drug trafficking organizations are not locally oriented criminal organizations, but complex, adaptive, interconnected groups that span states and cross international borders to achieve their goals (Geleri, 1999). In addition, contemporary technological developments and increasing financial power have made these organizations stronger and more dangerous; therefore, identifying and tracking their movements has become more difficult for law

enforcement agencies. Despite increasing law enforcement efforts, it has been suggested that organized crime groups are still powerful in drug trafficking in Turkey (TNP, 2004), and that law enforcement efforts are not effective in dealing with this increasing problem (Buker, 2006; Geleri, 1999).

The majority of law enforcement officers devote much of their efforts to apprehending drug users, who are easier targets than drug dealers and drug trafficking organizations. In addition, the lack of cooperation and information sharing among police officers, which is crucial for effectively fighting drug trafficking organizations, forces officers to aim for drug users rather than traffickers (Eatherly, 1974). Competition between officers for promotion to a limited number of career positions is one factor leading to an environment in which information is not shared. Competition is usually considered a positive incentive because it rewards better performance; however, there is a high probability that officers withhold information from each other to gain an advantage and influence superiors' decisions on their performance appraisal, or to gain the favor of superiors by not sharing—or even concealing—information. Another barrier to cooperation is that officers in a department do not want to lose the potential strategic advantages derived from available information by sharing it with other officers. To illustrate, a law enforcement agent who has information that may enable him to arrest an important suspect is usually unwilling to share the information with other agents or agencies because he may not receive credit for the arrest if he does so.

Social capital may have significant implications for policy makers and police administrators, as well as public administration and criminal justice researchers, in addressing the problem defined above. Research suggests that social capital, defined as "the sum of actual

and potential resources embedded with, available through, and derived from the network of relationship possessed by an individual or social unit" (Nahapiet & Ghoshal, 1998, p. 243), significantly contributes to organizational effectiveness by increasing motivation, solving coordination problems, facilitating information flow between individuals and organizations, and developing knowledge within organizations. In addition, social capital is necessary for organizations because individuals who know, understand, and trust each other are more likely to work together efficiently and effectively (Adler & Kwon, 2002; Lazega & Pattison, 2001; Leana & Van Buren, 1999; Lin, 2001; Lin & Wan, 2009; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998; Walker, Kogut, & Shan, 1997). However, few studies have used the perspective of organizational social capital to examine police organizations (Langbein & Jorstad, 2004). Using survey data from different drug law enforcement departments in Turkey, this study examined the relationship between organizational social capital and the perceived performance of drug law enforcement organizations.

This study uses the term "social capital" to refer to the quality of the relationships between and among police officers within departments. Three different dimensions of organizational social capital were examined in the study: (1) the structural dimension, concerning the extent to which individuals within an organization are connected with each other; (2) the relational dimension, referring to the quality of the connections between members within an organization; and (3) the cognitive dimension, focusing on whether individuals share a common view or understanding (Nahapiet & Ghoshal, 1998). It was expected that a higher level of relational, cognitive, and structural social capital among police officers would increase the performance of drug law enforcement departments.

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1.2. Purpose of the Study and Research Questions

The literature shows that the relationships among organization members affect various aspects of organizational performance, such as information sharing, access to opportunities, and support to improve productivity (Adler & Kwon, 2002; Leana & Van Buren, 1999; Nahapiet & Ghoshal, 1998). As with employees in other organizations, police officers rely on social relationships in the work environment to improve performance. Because of the nature of their work, police officers working in drug law enforcement departments particularly need a higher level of information sharing, cooperation, and motivation, which are possible consequences of social capital. In this study, using survey data, the relationship between three dimensions of organizational social capital and the performance of drug law enforcement departments in Turkey was examined. The research questions addressed in this study were as follows:

1. Do the dimensions of organizational social capital (relational, structural, and cognitive) have a relationship with the performance of drug law enforcement departments?

2. Do the three dimensions of social capital correlate with each other?

3. Which dimension of organizational social capital has the strongest relationship with the performance of drug law enforcement departments?

1.3. Significance of the Study

The literature provides a considerable number of qualitative studies in the area of social capital; however, few empirical studies have examined the link between organizational social capital and the performance of drug law enforcement departments. Therefore, by quantitatively examining the social capital concept at the organizational level, this study has the potential to make a theoretical contribution to social capital research.

The three dimensions of organizational social capital have primarily been examined separately by researchers. There is a lack of empirical research investigating the interrelationships between the three dimensions of organizational social capital. Therefore, by empirically testing the correlations between these dimensions of organizational social capital, this study can contribute to the literature on social capital.

This study empirically tests the model of organizational social capital in police organizations and specifies the important dimensions of social capital among police officers—a topic rarely addressed in the criminal justice literature. In addition, the current study is the first empirical study to examine the organizational social capital concept in public-sector organizations, particularly law enforcement organizations in Turkey. Therefore, this study can provide an important basis for future research in this field in Turkey—another significance of the study.

In addition, the results of this study are important in demonstrating the significance of social relations among officers for law enforcement organizations in Turkey, which have traditionally relied on a command-control and strict hierarchical management style. In this vein, the study could have valuable practical implications for police practitioners. The study investigated whether emphasizing social networks in the work environment of Turkish National Police (TNP) officers can address the lack of cooperation and information sharing among officers that constitutes one of the major problems in drug law enforcement departments. Therefore, the current study also has significant potential to shape policy formation for policy makers and law enforcement practitioners regarding performance-improvement activities.

2. LITERATURE REVIEW

The literature review section first focuses on the definition of social capital and the development of social capital theory by presenting the works of major contributing scholars in this field. Along with the possible benefits and negative outcomes of social capital, its structural and normative aspects are also discussed. Second, the concept of organizational social capital is discussed and previous studies focused on developing an organizational social capital model are presented. Finally, the literature review focuses on organizational performance and how various aspects of organizational social capital may have the potential to influence the performance of drug law enforcement departments.

2.1. <u>Social Capital</u>

Social capital theory has been extensively used by a number of researchers in various disciplines in the field of social sciences. However, there is no single agreed-upon definition of the term in the literature. Social capital is considered an umbrella concept because various social concepts are brought together under and encompassed within it (Hirsch & Levin, 1999). It is widely accepted that trust, reciprocity, and connectedness in a social network constitute social capital. Social capital is primarily defined as an asset that exists in social relations among individuals, networks, and communities (Burt, 1997; Coleman, 1990; Nahapiet & Ghoshal, 1998; Putnam, 2000).

Bourdieu (1985), Coleman (1988), and Putnam (1993) have significantly contributed to the conceptualization of social capital (Baron et al., 2000). Bourdieu's (1985) broad approach to various forms of capital has increased the recognition of the social capital concept in the

academic world. Adding to the already recognized economic and cultural capital concepts, Bourdieu introduced the idea of social capital as crucial in human interaction. For Bourdieu, economic capital was not the only form of capital; some kinds of assets—for example, economic exchanges—may be the products of other types of capital, such as cultural and social capital. He defined social capital as actual or potential resources embedded in a durable social network of institutionalized relationships. In his conceptualization, the active involvement of all members, solidarity, and obligation are the main components of this network. Bourdieu (1985) conceptualized social capital by focusing on two elements: (1) the network that consists of social relationships, and (2) the capital (social, cultural, economic, etc.) that the members of the network possess. In other words, he emphasized the size of the social network and the extent to which the resources are possessed by the individual members of the network. According to these definitions, social capital is a resource created by the relationships among individuals and other forms of social structures such as organizations, communities, and societies. Social capital is a value similar to other forms of capital such as physical and human capital. Social capital, however, is based on social relations among individuals, while human capital is based on education, experience, and technical ability. On the other hand, physical capital is based on more tangible assets such as equipment, tools, or machines (Coleman, 1988; Lin, 2001).

Concentrating on dense social networks and their impacts on educational and community institutions, Coleman's (1988) social capital approach has significantly contributed to social capital research. Taking into account the importance of the structure of social relations, he emphasized the functional aspects as well as the benefits of social capital. According to his definition, social capital "is not a single entity but a variety of different entities, with two

elements in common: They all consist of some aspects of social structures, and they facilitate certain actions of actors—whether persons or corporate actors—within the structure" (Coleman, 1988, p. 98). The social structure within a network, characterized by the density of the network and the strength of the ties among individuals, creates the functionality and the benefits of social capital. Accordingly, social norms derived from a dense, strong social network facilitate certain actions of the network members, which lead to collective action. For Coleman, social capital, by facilitating collective actions, makes achievable certain goals that are not possible individually.

Putnam (1993, 2000) is considered one of the most influential theorists to have contributed to the social capital theory. His book *Bowling Alone* (2000) reflected much of his social capital approach. In this book, he attributed the decline of civic engagement and connectedness in the American society to the lack of social capital in communities. He argued that the decline of social capital in communities negatively affected public participation in the democratic process. Putnam (2000), in his definition, referred to social networks, norms of reciprocity, and trustworthiness as properties of social capital and asserted that these properties arise from connections among individuals. Putnam believed that contemporary technological and social developments in the modern era have not only made American social and economic problems more complex and serious, but also resulted in the decline of connectedness and solidarity in American society. To cope with these complex problems related to health, education, crime, and economic welfare, Putnam proposed, social capital needs to be promoted in communities. For example, civic organizations have significant potential to facilitate the development of social capital because they help individuals build network connections with each

other. For this reason, he considered social capital a civic virtue and suggested that social capital facilitates strong and durable community involvement in economic and social policies.

Burt (1992, 1997, & 2000) also made important contributions to the social capital field with his structural holes argument, which originated from the weak ties argument of Granovetter (1973). He suggested that structural holes are connections between social networks that function as gates for social structures through which new resources and information can flow into the networks. According to Burt (1997), an actor positioned at the structural holes as a broker possesses significant strategic advantages and is able to control information and activities between the networks. In his approach to social capital, Burt particularly emphasized the opportunities and values that may exist in spanning networks. His most significant contribution to the social capital literature is related to the possible benefits of spanning networks. He argued that, like closed networks, spanning networks may also be important sources of social capital and generate values and opportunities.

Lin (2001) has also contributed to social capital research. His argument regarding discussions on whether social capital is a capital like human capital and cultural capital has been widely recognized by social capital scholars. Lin viewed social capital as a capital like others and argued that social relations are the main components of social capital through which tangible resources are available and accessible. Lin described social capital as "resources embedded in a social structure that are accessed and/or mobilized in purposive actions" (2001, p. 29). According to Lin, social capital is a kind of investment in social relations made by individuals in order to access and utilize concrete resources available in social networks.

Though many scholars describe social capital in similar ways, several different conceptualizations of the term have been used by researchers in the literature. These distinctions are primarily based on levels of analysis and primary versus secondary benefits of social capital. While social capital has been described by Useem and Karabel (1986) and Burt (1997) as an attribute pertaining to individual actors, other scholars have described it at the macro level and considered it an attribute of society, community, region, and nation (Fukuyama, 1995; Pearce & Randel, 2004; Putnam, 1993, 2000; Walker, Kogut, & Shan, 1997). On the other hand, Fukuyama (1995) pointed out the possible economic benefits of social capital and suggested that it could have a significant positive effect on the economic development of geographic regions or countries.

As explained before, different conceptualizations of the term *social capital* have generated various descriptions in the social capital literature. Therefore, it is important to identify the components and properties of social capital in order to understand different aspects of the concept such as its structural attributes, normative aspects, and beneficial aspects. The various components and attributes proposed by social capital researchers are discussed in the following section.

2.1.1. Structural Attributes of Social Capital

The structural attributes of social capital have often been examined in terms of the structural characteristics of the ties within the social network, such as bonding and bridging (Lin, 2001). These two distinct characteristics also relate to the concepts of open and closed social networks. While bonding refers to networks in which the actors focus exclusively on internal ties, bridging refers to networks in which the actors focus more on external ties to those outside

the network (Adler & Kwon, 2002; Putnam, 2000). According to Coleman (1998, 1990), dense

social networks with strong ties between members are necessary for social capital to produce the

desired values and outcomes. In addition, closed networks are considered to have a strong

positive relationship with trust because individuals in closed networks more easily know and

interact with each other and develop trustworthy relationships. Network closure and density bond

the members to facilitate solidarity, cohesiveness, and collective action. Therefore, the actors

develop and maintain strong internal ties with others in the network. It has been suggested that

by enhancing cooperation, resource exchange, and collective action, the bonding aspects of

social capital generate significant benefits, especially those pertaining to the public good, for

collectivities (Putnam, 2000). In addition to their tangible benefits, strong ties likely provide

individuals with intangible advantages, such as receiving social and psychological support from

others and reducing monitoring costs (Granovetter, 1982).

The bridging aspect of social capital refers to external ties that connect to outside actors

or other networks. The discussions regarding the bridging aspects of social capital are to a large

extent based on Granovetter's (1973) argument of "the strength of weak ties." Granovetter

argued that an actor should build external ties with the actors in other networks to reach more

valuable and diverse resources and opportunities because the resources in the actor's immediate

network are limited. Based on this approach, Burt et al. (2001) suggested that network closure

sometimes limits the positive outcomes of social capital because information processed within

the network may be redundant. By facilitating information sharing and resource exchanges with

the external environment, structural holes enable the network to acquire new information and

find new opportunities and solutions to the problems. With the concept of structural holes, Burt

referred to the "relationship of nonredundancy between two contacts" (2001, p. 18).

Distinguishing structural holes from weak ties, he argued that information advantages and the

control of resources are made possible by structural holes, not weak ties. External relations are

the main components in this form of social capital, which was named "bridging social capital" by

Putnam (2000).

Although these two network characteristics are distinct, they are not mutually exclusive.

According to Putnam (2000), almost all social structures to some degree utilize both bonding and

bridging strategies simultaneously. Each type has the capability to create different kinds of

advantages and opportunities based on the network settings. Which one is more beneficial

depends on the contexts or the situations in which the actors operate (Adler & Kwon, 2000). This

study focused more on the bonding aspect of social capital than the bridging aspect, because

rather than examining the social relations spanning organizational boundaries, it considered the

social relations within organizations.

2.1.2. Normative Aspects of Social Capital

Trust, reciprocity, and obligation are the main normative properties of social capital.

Regardless of the level of analysis, trust level has been considered the most essential component

of social capital. For example, Fukuyama (1995) and Cohen and Prusak (2001) suggested that

social capital to a large extent depends on the prevalence of trust in a group. Similarly, Molinas

(1998) emphasized the importance of the level of trust along with community networking as two

dimensions of the social capital construct. There are many and diverse definitions of trust in the

literature. One definition named trust as mutual confidence, in a relationship between two

individuals, that neither will exploit the other's vulnerabilities (Cohen & Fields, 1999). Many researchers have found trust to be necessary in creating and maintaining social capital.

Coleman (1988) viewed trust as a reflection of an actor's reliability and adherence to obligations in performing within a social structure. Similarly, Burt (1992) suggested that trust represents the extent to which an actor is confident in relationships in terms of information exchange and performing duties. According to Leane and Van Buren's (1999) conceptualization, trust can be defined in two ways: fragile versus resilient trust, and dyadic versus generalized trust. Fragile trust is built on formal transactions and produces short-term outcomes. Resilient trust is longer-lasting and built on relational experiences and strong relations among the group members. It emerges among the group members possessing values and norms that are entrenched. Therefore, trust is a necessary component for social capital to be formed and produce the desired ends (Adler & Kwon, 2000). Furthermore, Adler and Kwon argued that trust originates from shared values and accepted norms in a social network. Therefore, by facilitating social exchange, trust likely helps actors solve coordination and cooperation problems (Nahapiet & Ghoshal, 1998).

Trust is also considered to be closely interrelated with the concept of reciprocity (Putnam, 2000). Reciprocity is another essential norm for social capital to develop in a social network. The norm of reciprocity is a belief that when an exchange, such as that of money and information, occurs between two parties, both parties respond to each other by giving back and returning the favor in the future. Reciprocity norms facilitate cooperation by creating a belief that cooperative exchanges are beneficial and will be long-lasting. In addition, it has been suggested that there is a

close relationship between reciprocity and the norm of obligation necessary for the actors to maintain their trustworthiness in the social network (Fukuyama, 1995).

2.1.3. Beneficial Aspects of Social Capital

Various possible benefits of social capital have been discussed with respect to social capital perspectives. However, information is considered the most prominent and direct benefit of social capital because relationships and actions in social structures are to a large extent based on information flowing among actors (Coleman, 1990; King, 2004; Nahapiet & Ghoshal, 1998). A primary benefit pertaining to information is that social capital can facilitate access to necessary information and information sharing and enhance information quality. Lin (2001) and Burt (1992) also supported this argument by suggesting that the information shared by actors strongly affects available opportunities and that social capital enhances information dissemination in the network.

Control, influence, and power are identified by Sondefur and Lauman (1988) as the other potential benefits of social capital. According to the concept of control, normative properties of social capital such as trust and obligation can be utilized to promote collective goal orientation— that is, by constraining undesirable activities in terms of collective goals, these social norms shape and control individual behaviors and facilitates collective action.

Similarly, solidarity, characterized by the cohesiveness of the group or network, is another valuable benefit of social capital (Sandefur & Lauman, 1988). According to King (2004), solidarity, by enhancing connectedness and cohesion among individuals or groups, helps them come together and pursue a common goal. This is viewed as the key factor that facilitates collective action. It has been suggested that solidarity is positively correlated with the level of

network closure, which encourages compliance with the group (Adler & Kwon, 2002). In this sense, solidarity is considered effective in reducing the costs of monitoring. The concepts explained above are not the only benefits of social capital; however, other benefits are more or less related to these concepts.

Another distinction among the conceptualizations of social capital is based on the primary and secondary benefits of social capital. This distinction primarily concerns how the benefits of social capital are distributed. The benefits of social capital are also categorized in terms of potential beneficiaries, such as individual versus collective benefits or the private versus the public good. Fukuyama (1995) and Coleman (1990) emphasized the public good aspect of the benefits of social capital and suggested that community and society benefit more directly from the presence of social capital than do individuals. In contrast, according to Burt (1997), Flap and Volker (2001), and Lin et al. (1981), individuals benefit more directly depending on their own levels of social capital. These researchers argue that social capital is a private good rather than a public good, and that individuals' benefits vary based on their individual positions. Others examine the beneficial aspects of social capital in an organizational context by relating it to organizational performance (Baker, 2000; Bolino, Turnley, & Bloodgood, 2002).

The term *individual benefits* refers to the idea that the resources provided by the network are used by and benefited from primarily by the actors for their individual interests, such as increased social or political status, favorable reputation, promotions, and increased economic status (Flap & Walker, 2001; Lin, 2001). The individual benefits of social capital are more clearly described in Burt's (1997) description of the structural hole; he asserts that the actor in

such an advantageous position benefits the most because he or she controls information flow and other resources coming into the network.

On the other hand, the collective benefits of social capital are defined as the rewards or resources gained primarily via social structures such as organizations, networks, and communities rather than by individual actors. It has been argued that individuals are willing to comply with collective norms or rules and pursue collective rather than personal goals because they believe that long-term achievements are made possible only by collective action (Coleman, 1988; Lazega & Pattison, 2001; Leana & Van Buren, 1999). Through collective action, better opportunities become available within social structures; in addition, collective action may also enable some individual benefits that cannot be achieved individually. According to Putnam (2000), social capital generates individual and collective benefits simultaneously—they are not mutually exclusive.

As regards the sources of social capital, Bourdieu (1985) and Coleman (1988) asserted that social capital is a property of collectives rather than individuals and is embedded within social relations. Regardless of the definition and level of analysis used, most researchers have suggested that social capital is a valuable asset for individuals, communities, and societies because it promotes coordination, facilitates information sharing among individuals, diminishes transaction costs, encourages collective work, and contributes to economic and community development (Lazega & Pattison, 2001; Lin, 2001; Putnam, 1993). Focusing on the outcomes of social capital as they pertain to organizational performance and considering drug law enforcement departments as beneficiaries of social capital, this study emphasizes the public-good aspect of social capital.

2.1.4. Negative Consequences of Social Capital

Most social capital studies have examined only the positive outcomes of social capital in the literature. Some authors argue that social capital can also have negative consequences for both individuals and collectives (Adler & Kwon, 2002; King, 2004; Leana & Van Buren, 1999; Portes, 1998); however, the negative side has only rarely been examined. The negative consequences of social capital are considered to originate primarily from group solidarity in the network. When a group possessing strong solidarity becomes dominant within a social structure, it may exclude other groups to maintain its privileged status (Portes, 1998). The dominant group uses its monopoly power to prevent other actors or groups from accessing and utilizing available resources, such as information and opportunities (Adler & Kwon, 2002). In an organizational context, for example, some groups, such as top-level management, can exploit social capital by undermining workers' benefits. Furthermore, exclusivity may result in an environment in which exploitative and corrupt activities are pervasive (Adler & Kwon, 2002). Second, overly strong group solidarity may lead to diminished personal freedom and high loyalty or conformity, which may reduce incentives for innovative activities and creative thinking (King, 2004; Leana & Van Buren, 1999). Strong solidarity may also prevent new ideas from flowing into the network. In other words, as suggested by Powell and Smith-Doerr (1994), "the ties that bind may also turn into ties that blind" (p. 393). Likewise, Nahapiet and Ghoshal (1998) assert that excessive group loyalty may pose an obstacle to the transfer of new information, which creates collective blindness in the social structure. In addition to these possible negative outcomes, social capital may be risky: Building social capital is not costless, since maintaining relationships is an important requirement in building social capital, and this maintenance requires an investment of

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time and effort (Adler & Kwon, 2002). Having stated the possible negative outcomes of social capital, however, previous empirical studies support the argument that social capital's positive outcomes outweigh its downsides. In this study, therefore, social capital's positive outcomes were focused upon and examined.

<p style="text-align:center">2.2. <u>Organizational Social Capital</u></p>

Though relatively few studies have examined social capital as an organizational phenomenon, the number of researchers examining the concept of social capital in organizational settings is increasing rapidly (Lin & Wan, 2009; Nahapiet & Ghoshal, 1998; Oh, Chung, & Labianca, 2004; Subramaniam & Youndt, 2005; Tsai & Ghoshal, 1998). Empirical studies on organizational social capital in the literature have concentrated primarily on private-sector organizations. The majority of these studies have examined how social capital, as an organizational concept, is related to organizational performance and competitive advantage; however, the number of studies examining the concept of social capital in public-sector organizations is limited. Therefore, in this study discussions of organizational social capital and its relationship with the performance of drug law enforcement departments were largely based on the theoretical and empirical evidence produced by the private-sector studies.

A number of alternative frameworks specifying different aspects of social capital have been proposed by the researchers. Three forms of social capital identified by Coleman (1988) relate to organizational context: (1) norms, which are expectations that individuals should pursue collective interests; (2) information channels through which individuals can share information with each other; and (3) expectations, obligations, and trustworthiness. These forms may have significant implications for organizational studies.

Cohen and Prusak (2001) pointed out the importance of social relations in creating an organizational environment in which members can connect and act collectively. It has been argued that organizations should strive to develop social networks because increased social relations create shared understanding and collective goal orientation, which in turn facilitate desired organizational behaviors (Cohen & Prusak, 2001).

Social capital has also been examined as an attribute of organizations by Leana and Van Buren (1999). Emphasizing the normative aspects of social capital, they define organizational social capital "as a resource reflecting the character of social relations within the firm" (p. 538). They described social capital as existing properties owned by organizations that can be utilized or activated through social relations among the members. The normative qualities of social relations, including reciprocity, trust, obligation, and collective goal orientation, play a significant role in their perspective. Social relations with these qualities can offer positive outcomes for the organizations, such as increased information sharing and enhanced collective action or cooperation. Emphasizing the public-good aspects of social capital, Leana and Van Buren (1999) identified two basic components of social capital: associability, which refers to the level of collective goal orientation; and trust, which refers to shared trust among the members of organizations. Associability is "the willingness and ability of participants in an organization to subordinate individual goals and associated actions to collective goals and actions" (p. 541). In this approach, associability comprises the actors' ability to engage in social interaction and the actors' willingness to focus more on collective goals than on individual interests. Shared trust, the second component of their social capital framework, plays a key role in the development of organizational social capital. Trust is essential for individuals to work together towards collective

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goals within organizations. According to this theoretical model, there are various ways in which social capital can produce potential benefits. First, by justifying individual commitment, social capital can convince individuals to work towards collective and organizational goals. Second, by emphasizing collective action and relying on shared trust rather than individual incentives or formal monitoring efforts, social capital can facilitate the creation of cross-functional teams and flexible work organizations based on the task. Finally, social capital may help manage collective actions by reducing transaction costs pertaining to work relations in organizations, which may be an efficient solution for uncertainty. In addition, when it comes to utilizing social norms and values within organizations, social capital may be more effective in ensuring collective behavior than formal work incentives and hierarchical control mechanisms. According to Leana and Van Buren (1999), these characteristics provide organizations with successful collective actions from which both organizations and the individuals within them can benefit. Furthermore, in terms of information sharing, they postulated that social relationships can provide more efficient channels by which to access and disseminate information than formal channels.

Most of these organizational social capital approaches share characteristics with Coleman's (1988) perspective on closed networks or bonding social capital, suggesting that dense networks and strong ties among individuals result in improved collective action within social structures.

On the other hand, employing the multidimensional model of social capital in the health care sector, Lin and Wan (2009) examined the role of organizational social capital in improving partnership and collaboration opportunities among the members of Taiwan's community care network. Their study empirically examined organizational social capital by focusing on

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interorganizational collaboration and interorganizational networks. This study also identified

possible indicators that could serve as measures of each organizational social capital dimension

among network members (Lin & Wan, 2009).

2.2.1. A Multidimensional Model of Organizational Social Capital

Nahapiet and Ghoshal (1998) argued that organizational social capital should be studied

from a multidimensional perspective. This multidimensional model includes the relational,

cognitive, and structural domains. They postulated that these social capital dimensions have a

positive impact on organizational performance, and particularly emphasized the concept of

intellectual capital, which plays a crucial role in the link between social capital and performance.

Therefore, it is important to understand the intellectual capital concept before discussing the

dimensions of organizational social capital.

New technological developments, information, and knowledge have become significant

driving forces for changing the organizational environment in which both public- and private-

sector organizations operate. These concepts are playing an increasingly important role in the

modern organizational environment relative to traditional organizational resources such as

physical assets, space, and the workplace (Lesser, 2000). In such an environment, organizations

have increasingly recognized the significance and value of knowledge and information. The

nature of knowledge and information make it impossible for an individual to create, manage, and

utilize knowledge effectively; collective action is crucial to dealing with knowledge. Therefore,

in recent years, information sharing and collective knowledge have emerged as important

concepts that are strongly related to social relationships within organizations (Kogut & Zonder,

1996). As well, individual application of knowledge is insufficient to solve complex problems

possessing multiple dimensions and stakeholders. Therefore, it is imperative to interact with others to access a diverse knowledge base. In this new approach, organizations are not strictly hierarchical entities formed and structured to maintain a command-control management system for the sake of efficiency. Organizations are, instead, seen as social structures in which social interaction and learning occur, which eventually results in knowledge creation and sharing. From the social capital perspective, knowledge is one of the primary assets that can be capitalized through social relations within an organization (Subranamian & Youndt, 2005; Tsai & Ghoshal, 1998).

Emphasizing the concept of intellectual capital, Nahapiet and Ghoshal (1998) proposed a comprehensive model of social capital that could be utilized in an organizational context. They defined social capital as "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (p. 243). Their framework encompasses various concepts such as the three dimensions of social capital, intellectual capital, combination and exchange, and the development of organizational social capital. Intellectual capital is defined as the "knowledge and knowing capacity of social collectivity" (Nahapiet & Ghoshal, 1998, p. 245). More specifically, intellectual capital is a kind of resource and capability that organizations possess which enables them to act on the basis of knowledge and knowing. From this perspective, intellectual capital refers to collective knowledge and collective knowing created through and embedded in social practices rather than individual knowledge. It has been suggested that collective knowledge is likely to last longer and be more beneficial than individual knowledge. In addition, individuals contribute to collective knowledge beyond their time as part of a

collective; even when individuals leaves a social structure, the knowledge they have provided

remains in that social structure. According to Nahapiet and Ghoshal (1998), social capital

facilitates the creation and dissemination of collective knowing and knowledge within

organizations.

Exchange and combination, the other component of their model, play important roles in

creating intellectual capital. Exchange is defined as knowledge and experience sharing between

different actors via social interactions. Nahapiet and Ghoshal (1998) postulated that different

parties having social connections with each other can exchange knowledge more easily and

effectively. Cohen and Prusak (2001) suggested that explicit knowledge such as data, facts, and

new information is transferred primarily via technological channels. However, implicit

knowledge, including values and norms, is not transferred in organizations, although it is also

essential for daily operational practices. Face-to-face communication is the best channel through

which to transfer implicit knowledge and enable workers to cope with complicated situations

(Cohen & Prusak, 2001).   Improved knowledge exchange is not the only outcome of social

interactions. Social interactions also facilitate the combination of knowledge, through which new

knowledge and innovation can develop.

The three dimensions ascribed to social capital—structural, relational, and cognitive—are

the most influential aspect of Nahapiet and Ghoshal's framework. Their perspective on

intellectual capital suggests that exchange and combination within organizations are possible

through these dimensions of social capital.

Structural Social Capital: The structural dimension refers to the structure of relationships

that enhance the linkages between and accessibility of members to each other. Accessibility and

linkages of individuals to each other can be either facilitated or constrained by the structure of the social relationships in the organization. One of the most important aspects of this dimension is whether network ties exist between individuals. The structural dimension also contains other components, such as network ties and network configuration. Network ties are the social connections that individuals have within the organization. It is related to the extent to which an individual has access to other members in an organization. The characteristics of these connections, such as density and closeness, constitute network configuration. Nahapiet and Ghoshal (1998) postulated that the structural dimension of social capital affects the ability of individuals to access other members and exchange knowledge.

Cognitive Social Capital: The cognitive dimension of social capital refers to the members' shared understanding and interpretation. Nahapiet and Ghoshal (1998) pointed out the significance of the cognitive dimension by explaining how it creates the conditions under which intellectual capital develops. Knowledge combination and exchange, which are two components of intellectual capital, occur when the parties possess a shared context, made possible "through the existence of shared language and vocabulary and through the sharing of collective narratives" (p. 253). In this perspective, shared language refers to words that are common and that have certain contextual meanings in practice. Codes, on the other hand, categorize information and provide a frame for interpreting and understanding context. Through language, people can communicate with each other, exchange knowledge, and develop business relationships. It is easier for individuals who share a common language and codes to access other people and information.

The other element of the cognitive dimension is shared narratives. Shared narratives comprise various concepts such as stories, myths, and metaphors that create and transfer new knowledge and interpretations of events occurring within organizations. In considering the potential impact of common perceptions and interpretation, Bolino, Turnley, and Blodgood (2002) suggested that the cognitive dimension of social capital relates positively to shared vision. Shared vision is a kind of bonding mechanism that facilitates the integration of different components of an organization (Tsai & Ghoshal, 1998). Similarly, according to Leana and van Van Buren (1999), goal orientation and collective action are the components of organizational social capital.

Relational Social Capital: The relational dimension of social capital reflects the normative characteristics and qualities of social relationships, which include reciprocity, trust, and obligation between individuals in an organization. Trust, reciprocity, obligation, and identification are the elements of normativity (Nahapiet & Ghoshal, 1998). The normative aspects of social capital, such as trust, reciprocity, and obligation, were discussed in the previous section. Emphasizing the significance of these elements in creating intellectual capital within an organization, Nahapiet and Ghoshal (1998) asserted that individuals who have social relationships high in trust are more likely to exhibit cooperative behavior and engage in social exchange. Trust, the first element of this dimension, keeps the communication and interaction channels open and "indicates greater openness to the potential for value creation through exchange and combination" (p. 255).

Reciprocity is another important element in the relational aspect of social capital. Repeated interactions that are essential for developing long-lasting social relations occur only

through the existence of a sense of reciprocity between individuals. These components of the relational dimension can function within social structures that exhibit the characteristics of a closed network. As Coleman (1990) argued, social norms can develop within strong, dense networks. By constraining undesirable activities, these social norms shape and control individual behaviors that eventually facilitate collective actions.

The final element of the relational dimension is group identification: individuals' perceptions that they belong to a group. Group identification occurs when individuals accept the values and the rules of a group. At the end of the process, they have a sense that they belong to the group. According to Nahapiet and Ghoshal (1998), group identification can have a significant impact on the perceptions of the actors in an organization. For example, even if a worker has the opportunity to work in a more desirable position than his or her current place of employment, he or she may stay in the organization because of his or her attachment to other workers there. Cohen and Prusak (2001) have asserted that these normative qualities constituting relational social capital can develop and accumulate over time through positive and persistent social interactions.

2.2.2. Social Capital in Police Organizations

A number of studies address the concept of social capital in an organizational context; however, most of them have examined private firms (Dess & Shaw, 2001; Tsai, 2002). The literature on organizational social capital in public organizations, particularly in police organizations, is limited. Previous studies in the field of policing have primarily examined social capital in the context of community policing. One of these scholars, Lyons (1999), focused on the implications of social capital for creating crime-prevention partnerships between police

departments and communities. He proposed that a relationship exists between social capital and community policing; as well, he suggested that police participation in community policing programs can generate social capital in the focal communities. Lyons concluded that higher levels of social capital lead communities to cooperate more fully with the police in improving public safety. On the other hand, Duffee et al. (1999) emphasized the importance of social capital for police departments to achieve their goals in community policing efforts. They asserted that, in neighborhoods without sufficient social capital, it is difficult to provide citizen involvement in crime-preventing policing efforts. The studies mentioned above focused primarily on the relationship between the police and the community, and examined social capital at the community level.

Emphasizing the importance of strong, close social relations between police officers in a work unit, Klinger (1997) suggested that officers working in the same work group are more likely to develop informal group norms. In addition, informal group norms arise more easily among police officers assigned to the same geographical area.

Miller (1999), in her study on community policing, emphasized the significant role of informal relationships among police officers in developing cohesiveness within a department. She pointed out the relevance of informal interactions in terms of job performance in the workplace, and concluded that the community policing officers who developed informal peer relationships received greater support from other officers.

Officers' relationships with their supervisors may also influence police work. This influence becomes positive when the relationships are of a high quality. According to Wood (1997), people who have decision-making authority may play a significant role in creating social

capital in an organizational context. Police officers usually depend on their supervisors for information and support; therefore, positive relationships between officers and their supervisors are necessary for effective police work (Beck & Wilson, 1997).

Even though the above-discussed studies in the policing field are limited in number, their findings are consistent with social capital studies in other sectors. Based on these results, it can be proposed that police officers in a work environment with a greater number of social interactions and higher levels of trust are more likely to perform their jobs effectively. The current study specifically examined the concept of social capital, characterized by the relationships among police officers and how these relationships pertain to organizational performance, within drug law enforcement organizations. Rather than community social capital, the study focused on organizational social capital.

2.3. <u>Organizational Performance</u>

Why do some organizations perform better than others? It is difficult to answer this question with certainty. A number of organizational studies in the literature have focused on this question; organizational performance has become a central concern of researchers and organizations alike. Organizational performance refers to the extent to which an organization performs well in pursuing its mission or produces outputs towards its mission (Kim, 2005). The literature offers different approaches to understanding and assessing organizational performance. Though researchers have different perceptions, most agree that no single metric exists for how well organizations perform. Popovich (1998) offered a typical definition of high-performance organizations: "High-performance organizations are groups of employees who produce desired goods or services at higher quality with the same or fewer resources. Their productivity and

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quality improve continuously, from day to day, week to week, and year to year, leading to the achievement of their mission" (p. 11). According to Popovich (1998), in high-performance organizations, missions and outcomes are clearly defined and employees are empowered, motivated, and inspired to succeed. Flexibility, communicating with stakeholders, and restructuring work process are important characteristics of organizations that are able to adapt to new conditions and respond to customers, two features necessary for high performance.

Chun and Rainey (2005), in their empirical study, conceptualized and measured organizational performance by examining various components of performance, including productivity, administrative effectiveness, customer service orientation, and quality of service. Customer service orientation is an important component of public organizations' performance because citizens are the most important stakeholders and public organizations exist to provide satisfying service to them. As in other countries, due to recent initiatives regarding quality management in Turkey, customer service orientation and customer satisfaction have become increasingly important issues for public organizations. Productivity and quality of service are also significant components of organizational performance. Though these two components often seem to involve a tradeoff, including both elements in the measurement model offers the best method of encompassing more aspects of the performance construct (Chun & Rainey, 2005).

Because improving the organizational performance of public organizations is a basic concern in public administration, many researchers have focused on the factors affecting the performance of public organizations. However, empirically verifying these factors has presented a significant obstacle for researchers, because defining and measuring organizational performance is very hard (Brewer & Selden, 2000). Many different stakeholders are involved in

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public service production and delivery, and these stakeholders often do not agree as to which performance components have the highest priority (Brewer & Selden, 2000). Different stakeholders associated with the organization emphasize different criteria for evaluating organizational performance in accordance with their motivations, expectations, and needs (Scott, 1977). While external stakeholders such as clients focus more on outcomes and service quality, internal groups such as public managers and employees emphasize productivity and efficiency criteria. Similarly, researchers often disagree about which indicators of performance are the most important. Cameron (1986) also pointed out the difficulty inherent in conceptualizing organizational performance or effectiveness. Because of the nature of the concept of effectiveness, it is difficult to explain the entire meaning and name all the components of this construct. In the literature, several theoretical attempts have been made to provide a comprehensive performance measurement for public-sector organizations. While some scholars evaluate organizational performance generally (Berman & West 1998; Hedley, 1998), others emphasize the importance of performance measurement and monitoring (Hatry, 1999; Hatry, et al., 1999; Kopczynski & Lombardo, 1999). For example, using relatively more standardized performance measures, Simon (1998) examined the performance of seventy-seven federal agencies based on whether they received the President's Quality Award.

Various models for organizational performance have been proposed in the literature. Public administration scholars tend to rely on a single dimension of performance or a single consolidated index. However, public organizations have multiple stakeholders and provide a wide variety of services; therefore, organizational performance must be assessed from multiple perspectives (Boschken, 1994). Focusing solely on efficiency as a performance measure may be

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misleading, as this approach may lead researchers to ignore other important components of organizational performance, such as equity and fairness. A more comprehensive evaluation requires a measurement approach encompassing multiple dimensions of performance, such as internal and external criteria (Brewer & Selden, 2000; Cameron, 1986; Kim, 2005).

Similarly, Brewer and Selden (2000) argued that most of the empirical studies on the performance of public organizations have focused on one dimension of performance by selecting a single performance indicator. Many of them have used efficiency or productivity measures and neglected other important components such as fairness and customer satisfaction. Such an approach may offer misleading interpretations when it comes to performance (Brewer & Selden, 2000). Brewer and Selden (2000), in their theoretical model, conceptualized organizational performance by emphasizing the internal and external dimensions of performance elements. These dimensions include internal efficiency, internal effectiveness, internal fairness, external efficiency, external effectiveness, and external fairness. Both individual-level and organizational-level factors have been included in this study's model. Brewer and Selden (2000) tested this theoretical model by using data from the 1996 Merit Principles Survey and found adequate evidence to confirm the majority of the relationships in the model. They found that organizational culture, human capital, leadership, and teamwork are organizational-level factors that determine the performance of public organizations. On the other hand, individual-level factors such as task motivation, individual performance, and public service motivation also have positive relationships with organizational performance.

Following the model developed by Brewer and Selden (2000), Kim (2005) investigated the relationships between organizational performance and individual-level factors such as job

satisfaction, organizational commitment, public service motivation, and organizational citizenship behavior. Kim found positive and statistically significant relationships between these individual-level factors and the perceived organizational performance of public-sector organizations in Korea. According to his findings, among the individual-level factors in the model, job satisfaction indicates the strongest positive relationship with organizational performance.

It has been suggested that employees who are satisfied with their jobs are more likely to perform better in organizations. Job satisfaction is also considered to be positively correlated with motivation, organizational commitment, and job involvement, which are significant factors in organizational performance (Kim, 2005; Kreitner & Kinicki, 2001; Spector, 1997). Organizational commitment is defined as "the relative strength of an individual's identification with and involvement in a particular organization" (Kim, 2000, p. 247). Kim (2005) asserted that employees who are highly committed to their organizations are likely to exhibit higher levels of job performance. This finding supports the argument that organizational commitment is positively associated with organizational performance. In addition, organizational citizenship behavior is another important factor in improving organizational performance (Bolino, Turnley, & Bloodgood, 2002; Kim, 2005). Organ (1998) defined organizational citizenship behavior as "behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the efficient and effective functioning of the organization" (p. 4). In addition, Kim (2005) suggested that public workers who exhibit higher levels of organizational citizenship behavior report higher perceived organizational performance. The links between these factors and organizational performance are important because, as explained

in the theoretical framework section, most of these links also help to explain the theoretical relationships between the three dimensions of organizational social capital and organizational performance investigated in this study.

2.3.1. Performance of Drug Law Enforcement Organizations

When fulfilling their missions, public-sector organizations are supposed to take into account certain factors such as regulations, accountability, public perception, and politics; however, providing public services more efficiently and effectively remains a major concern. There is no doubt that many binding regulations and requirements exist for drug law enforcement departments in terms of accountability, integrity, human rights, and budgeting responsibility. Along with these requirements, however, it is also expected that the departments will perform efficiently and effectively because they spend tax money and are expected to provide the public with worthwhile services.

Parks (1974) asserts that it is hard to conceptualize precisely the outputs of law enforcement organizations; therefore, defining and measuring the performance of police departments has always been a difficult job for criminal justice researchers. Studies examining police performance often rely either on the perception of citizens as consumers of services or police officers as producers of services. In addition to the perceptual data, objective data such as crime rate, number of arrestees, and percent of crimes cleared by arrest have been used as performance measures (McDavid, 1977; Ostrom, Bogh, Guarsci, Parks, & Whitaker, 1973).

According to Jobson and Schneck (1982), the effectiveness of law enforcement is traditionally dependent on the extent to which police departments prevent crime and successfully investigate crimes committed. They operationalized and measured law enforcement effectiveness

by using multiple indicators such as crime rate, number of cases solved by department, officer performance ratings given by headquarters staff, performance scores as perceived by officers, and performance scores as perceived by citizens. Maguire (2008) suggested that studies on police performance traditionally use performance measures derived from data provided by police organizations. He argued, however, that comprehensive performance measurement in policing should also use sources other than department data, including community surveys, employee surveys, and direct observations. Police officers' evaluations of the performance of their own departments have also been used by researchers as measures of organizational performance (Smith & Ostrom, 1974; McDavid, 1977).

As with the performance of police departments, the performance of drug law enforcement organizations is hard to define and measure. It is therefore important to start by discussing the drug control policy in order to understand the indicators of drug law enforcement performance. The prohibition policy, one of the three basic drug-control approaches (which include legalization, prohibition, and decriminalization), is one of the primary strategies pursued by governments in their drug law enforcement policies (Brochu, 2006). Based on this approach, the primary goal of drug law enforcement efforts is to disrupt the illicit drug market by reducing the incentives toward involvement in drug trafficking. Shepard and Blackley (2004) emphasized the following generally accepted theoretical assumption: If supply reduction efforts are effective in reducing drug supply by disrupting delivery networks and increasing the risk of arrest, drug use will decrease—the desired outcome of the policy. Put differently, drug law enforcement pressure makes illegal drugs more difficult to find, increasing the retail price of drugs in the market, which will result in a decrease in drug consumption and drug abuse (Kleiman & Smith, 1990).

Using data derived from interviews with arrestees, The Arrestee Drug Abuse Monitoring (ADAM) survey provided valuable insights about the impact of drug law enforcement activities on the illegal drug market (National Institute of Justice, 2007). This study, conducted by the researchers of the National Institute of Justice, examined the dynamics of the illegal drug market in the U.S. The illegal drug trade is considered a market, and the dynamics in this market affect both drug trafficking organizations and users. Therefore, law enforcement efforts are concentrated on disrupting this market. How the illegal drug market reacts to law enforcement activities was used to evaluate drug law enforcement effectiveness in this study (National Institute of Justice, 2007).

But using retail drug market parameters for evaluation presents several difficulties. First, the multiplicity of markets may create misleading results. Each drug type may differ in terms of distribution channels, dealer characteristics, and user characteristics (Eatherly, 1974). There may be more than one drug market in a region (Curtis, Wendel, & Spunt, 2002; Rengert, Ratclifffe, & Chakarovrty, 2005). Researchers also report that markets vary by drug type; for example, marijuana markets differ from crack cocaine markets (Caulkins & Pacula, 2006). In addition, multiple drug trafficking organizations may inhabit any single region, and may change locations as a result of law enforcement pressure. Second, as in other markets, the retail price of an illegal drug is mostly determined by the balance between supply and demand. "All suppliers face a production costs, and they sell their product with the intent of covering the cost plus some profit" (National Institute of Justice, 2007, p. 9). Therefore, law enforcement activities aim to increase the retail price of illegal drugs in order to reduce availability. However, illegal drug market behavior and the balance between supply and demand are affected not only by law enforcement

efforts but also by other factors, such as changes in the number of users and changes in the amounts being produced (Moore, 1990).

Criminal justice researchers debate the disruptive impacts of drug law enforcement activities on the drug market. Various possible impacts have been identified by different researchers, including the displacement of illegal drug activities to another location, changes in buyers, changes in availability and price, and changes in overall illegal drug activities (Fuller & O'Malley, 1994). According to Moore (1990), the primary target of supply-reduction efforts should be the capacity of drug trafficking organizations to execute transactions, as well as their connections. Law enforcement agencies should focus on disrupting these connections and transactions at different levels. Governments need to use various instruments in their supply-reduction strategy and "rely on a portfolio of supply-reduction programs, not on any single device" (Moore, 1990, p. 111).

The aim of drug control policies is to reduce the number of drug users. The number of drug trafficker arrests, the volume of drug seizures, and the number of dismantled drug trafficking organizations are usually considered outputs of drug law enforcement. On the other hand, reducing the availability and increasing the retail price of a drug are generally identified as outcomes of the supply-reduction policy implemented by law enforcement organizations. Therefore, drug price is often considered a better indicator of enforcement effectiveness than organizational outputs such as arrests or seizures. As suggested by Moore (1990), "the basic goals of supply reduction and drug law enforcement are to minimize the supply of drugs to illicit markets and to increase the price and inconvenience of acquiring drugs" (p. 115). Though this standard method of measuring law enforcement effectiveness is widely used, it contains several

flaws. For example, the retail price of a drug is often used as a primary measure of the effectiveness of supply-reduction efforts; however, it may be misleading to attribute changes in drug price only to supply-reduction efforts, because a drug's supply is not the only determinant of its price (Moore, 1990). Possible demand-side changes, such as changes in the number of users and addict characteristics, may have a significant effect on the retail price of a drug and also need to be taken into account in this measurement. As well, when analyzing drug price, many other factors, such as changes in the production quantities in the drug's source country and changes in the quality (pureness) of a drug entering the country, should be controlled.

Number of arrests is one of the most widely used performance measures in drug enforcement organizations; however, better enforcement may exert an opposing influence on this measurement. For example, effective enforcement may change the behavior of traffickers in ways that lead to a lower arrest rate because of the deterrent effect of law enforcement. In addition, the number of arrests may decline because demand for a drug decreases as a result of effective treatment programs. Therefore, number of arrests alone may not accurately measure performance.

3. THEORETICAL FRAMEWORK AND HYPOTHESES

This chapter discusses the theoretical framework that guides the current study based on the available theoretical and empirical evidence in the literature. In addition, using theoretical perspectives proposed but not empirically tested and presenting empirical findings from the previous studies, the research hypotheses are developed and presented.

In the majority of the studies on organizational social capital, researchers have suggested that social capital has a significant positive effect on organizational performance. The overall conclusion of these studies is that organizations significantly benefit from social capital because individuals who know, understand, and trust one another are more likely to work efficiently and effectively (Adler & Kwon, 2002; Leana & Van Buren, 1999; Nahapiet & Ghoshal, 1998). As discussed in detail earlier, social relationships facilitate the creation and dissemination of knowledge that constitutes intellectual capital. As well, intellectual capital provides the organization with a competitive advantage, which is related to organizational performance (Nahapiet & Ghoshal, 1998).

Most of the empirical studies investigating the relationships between social capital and organizational outcomes have focused on mediating factors such as job satisfaction, motivation, organizational commitment, sustainable working environment, and service quality rather than direct relations to organizational performance (Bryant & Perkins, 1982; Danche, 2006; Oh, Labianca, & Chung, 2006). Since available empirical evidence supports the argument that the above concepts are the key factors in organizational performance (Bolino, Turnley, & Bloodgood, 2002; Chun & Rainey, 2005; Kim, 2005), it is safe to hypothesize that a positive

relationship exists between social capital and organizational performance. Highlighting the impact of social capital on these organizational concepts, this study focuses primarily on the possibility of a direct relationship between social capital and organizational performance.

The literature proposes various ways in which organizational social capital can create beneficial outcomes. Leana and Van Buren (1999) suggested that organizational social capital can lead individuals to attach more importance to organizational goals than individual interests. They considered flexibility another possible outcome of organizational social capital; social capital can facilitate flexibility in organizing and performing work. Social capital can also facilitate the management of collective action. Finally, social capital contributes to the intellectual capacity of an organization by facilitating information dissemination and accessibility (Leana & Van Buren, 1999).

Emphasizing a resource-based approach to organizations, Nahapiet and Ghoshal (1998) proposed that organizations with higher levels of social capital have a competitive advantage over organizations with lower levels of social capital. By establishing theoretical relations between social capital and the creation of intellectual capital, they argued that the existence of a social network characterized by strong interpersonal relationships enhances an organization's performance.

In this study, the definition of social capital created by Nahapiet and Ghoshal (1998) was used: "the sum of actual and potential resources embedded with, available through, and derived from the network of relationship possessed by an individual or social unit" (p. 243). The study follows Nahapiet and Ghoshal's (1998) model of organizational social capital, which consists of three dimensions: the relational dimension, the cognitive dimension, and the structural

dimension. This model is useful for studying social capital in an organizational context; their framework for organizational social capital was chosen because of its comprehensiveness for application in organizational settings and its use by a number of researchers (Bolino, Turnley, & Bloodgood, 2002; Inkpen & Tsang, 2005; King, 2004; Tsai & Ghoshal, 1998).
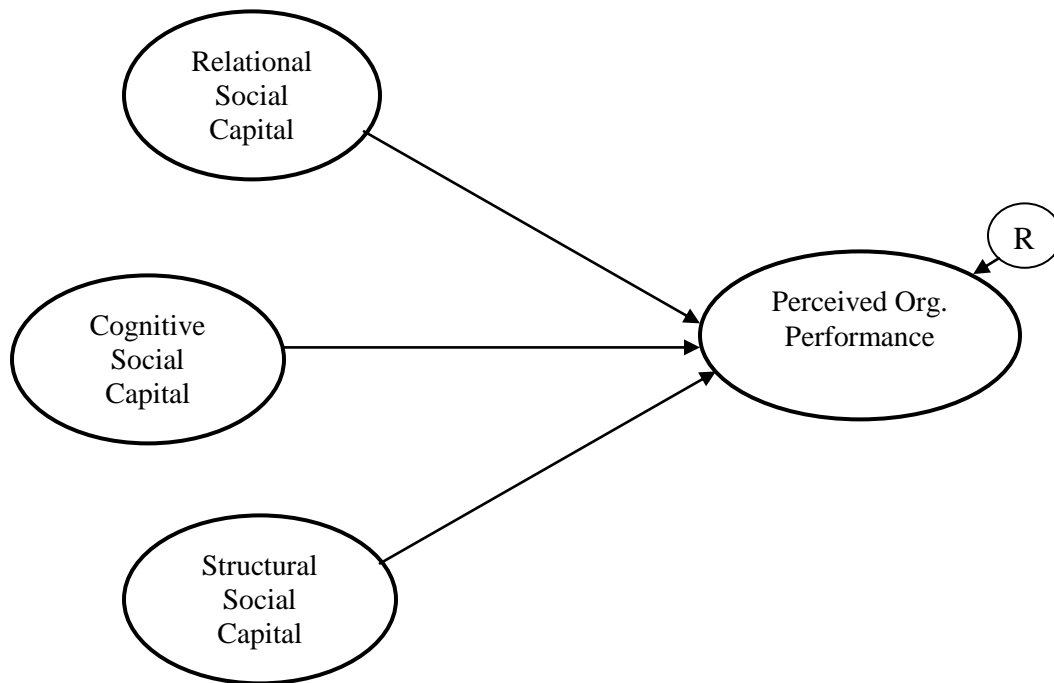
Figure 1. Path Diagram

Utilizing a multidimensional model for organizational social capital, this study aimed to validate and discuss the proposed relationships in the conceptual model along with the implications for drug law enforcement departments in Turkey. Figure 1 displays the conceptual model of the study adapted from Nahapiet and Ghoshal's (1998) organizational social capital model. Conceptualizing each dimension as a distinct factor, this model highlights the theoretical relationships between the three dimensions of organizational social capital and the performance of drug law enforcement departments.

3.1. <u>Structural Social Capital and Performance</u>

A higher level of structural social capital is assumed to improve the task performance of workers. For example, Moran (2005) found that structural social capital (reflected by network size and density) has a positive effect on task performance. It has been suggested that employees in an organization develop social networks that provide resources (e.g., information) in order to increase their performance. Being connected to a large network provides access to valuable information, which facilitates job performance (Morrison, 2002; Thompson, 2005).

The structural characteristics of social relationships are highly influenced by the management and work structures of the organization. Relationships between individuals working in traditional hierarchical organizational structures are limited in terms of quantity and strength. As well, these relationships most often demonstrate vertical characteristics, meaning that the relationships follow a strict hierarchical order oriented toward task fulfillment. However, by changing the unidimensional nature of rigid hierarchical relationships, structural social capital may permit the development of horizontal relationships and allow the existing social network to expand. These diverse and broader social relations could allow individuals to interact with the other units in the organization and facilitate information flow, which may improve task performance (Oh, Chung, & Labiance, 2004). One could argue that these kinds of changes in hierarchical organizational structures result in a loss of administrative authority and control—a potentially important concern, especially for organizations with quasi-military management structures. However, by empowering individuals and promoting increased employee involvement in the work process, this new approach can facilitate a more communal work environment in which workers can easily share experiences, knowledge, and information (Adler

& Borys, 1996). From this perspective, structural social capital is considered to be positively correlated with job satisfaction and motivation. In other words, a less hierarchical and more participatory work environment suggests a higher level of employee satisfaction and stimulation (Peter, Byrnes, Choi, Fegan, & Miller, 2002). Motivation theories also support this argument, and suggest that the extent to which employees are satisfied with their workplace relationships affects their job performance. For example, according to Herzberg's (1966) two factor theory, along with extrinsic factors such as a promotion, a nice office, and a good salary, intrinsic factors such as recognition, a good work environment, and positive social relations with coworkers significantly influence employee motivation (Gibson et al., 2003).

It has also been argued that a positive relationship exists between social relationships and organizational commitment (Cardona et al., 2004). Employees who socially interact frequently with their peers in the workplace are likely to exhibit a higher level of organizational commitment. In addition, Tsai and Ghoshal (1998) asserted that a greater ability on the part of workers to communicate and interact with others enables more effective information and knowledge sharing, which may positively affect the quality of services and innovation. Social relations may also be related to information-gathering efficiency. According to Coleman (1988), information is essential for action in the workplace; however, gathering and managing the necessary information is costly. The channels of information dissemination provided through social relations can make information gathering less costly in terms of time and other resources. These kinds of benefits are particularly important for drug law enforcement departments because the success of police operations against drug trafficking organizations relies primarily on sharing and collectively using information gathered by officers. Timely and accurate information is

necessary for the departments to identify drug transportation routes, dismantle distribution networks, and interdict drug-related financial activity (Monge, Fulk, Parnassa, Flanagin, Rumsey, & Kalman, 1996). Based on the theoretical evidence and empirical findings in the literature discussed above, the following hypothesis was developed to test the relationship between structural social capital and organizational performance:

H1: *Structural social capital is positively correlated with police officers' perceived organizational performance.*

3.2. Relational Social Capital and Performance

The relational dimension of social capital comprises the normative aspects of social relations among individuals, such as trust, reciprocity, and obligation. The available evidence in the literature theoretically and empirically supports the argument that components of relational social capital are positively correlated with important factors of organizational performance such as motivation and job satisfaction (Flap & Volker, 2001; Nahapiet & Ghoshal, 1998). Some indicators of motivation, such as approval of other workers and recognition, result primarily from workers' social relationships, which have a highly normative quality. Emphasizing the link between social relations and motivation, Herzberg (1966) pointed out the impact of intrinsic values, such as recognition and a positive work environment, on workers' motivation. In addition, Hogg and Terry (2000) pointed out the impact of the sense of group identity on workers' motivation—namely, the enhancement of self esteem and the reduction of uncertainty in social relations among them.

The relational dimension of social capital also relates to the concept of innovation. A social context with a high level of trust created by communication and interaction between

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members enables those members to exchange knowledge and new ideas, which may promote innovation in the organization (Ghoshal & Moran, 1996; Jaskyte & Dressler, 2005). Quality of service is also considered an important indicator of organizational performance; the presence of relational social capital may improve the quality of service offered by organizations. The components of the relational dimension, such as trust, reciprocity, and identification, facilitate the creation of common agreements or collective perceptions among workers regarding the quality of the outcomes (Tsai & Ghoshal, 1998), which may improve the overall quality of service and production by organization.

Relational social capital can create and strengthen the emotional links between individuals and groups. These links provide social support for individuals to cope with emotional problems such as stress, lack of job satisfaction, and burnout. For example, it has been suggested that job satisfaction is high when workers possess positive relationships with others in the work environment (Oh, Chung, & Labiance, 2004). Such support not only helps workers cope with psychological issues but also encourages teamwork, team spirit, and information exchange (Danchev, 2006; Ghoshal & Moran, 1996). It has been argued that workers achieve higher levels of performance when other workers socially accept them in the workplace (Bauer et al., 2007). In addition, relational social capital may have important implications for the adaptation of newcomer employees. By providing normative and technical information pertaining to the work at hand, the presence of relational social capital may facilitate officer adjustment. Assisting the adjustment process is beneficial in that it improves job performance (Morrison, 1993). Role clarity is a particularly important result of this adjustment process that may ultimately improve performance.

The social support aspect of relational social capital may have important implications for drug law enforcement departments. It has been empirically proven that police officers perform in a unique work environment in which they face unusually traumatic and stressful events, which could negatively affect their emotional well-being (Anshel, 2000; Deschamps, Pagnon-Badiner, Marchand, & Merle, 2003; He, Zhao, & Archbold, 2002). Police officers are more likely to experience high levels of stress and burnout than most other public workers because they are more likely to encounter violent incidents and use deadly force. Drug law enforcement officers are in a particularly high-risk group in terms of these negative work-related issues because they deal with more serious and complicated types of crime, including organized crime. Previous studies have suggested that high levels of stress and burnout result in decreased police officer performance (Goodman, 1990).

Pertaining to the norm of reciprocity, Watson and Papamarcos (2002) postulated that workers who have trusting relationships with coworkers are more likely to expect that those coworkers will reciprocate their efforts. If workers believe that their efforts will be met with a response by others, they will be more committed to both the group and the organization. The relationship between reciprocity and organizational commitment indicates that individuals are highly committed to their organization when a high level of reciprocity exists among them (Bolino et al., 2002; Kim, 2005). The strong relationship between the norm of reciprocity and interpersonal trust discussed in the previous section suggests that reciprocity may also have a positive relationship with many other factors that constitute organizational performance, such as motivation, organizational citizenship behavior, and information sharing.

Moran (2005) emphasized the link between the normative qualities of social relations among individuals and job performance. He asserted that the quality of employees' relationships with others predicts the quality of their task performance. Relational social capital is an important factor in encouraging individuals to engage in social exchanges with others (Moran, 2005; Nahapiet & Ghoshal, 1998). What is more, individuals who trust and identify with one another are more likely to help each other and to engage in cooperation (Bolino et al., 2002; Cardona et al., 2004). Individuals with higher levels of relational social capital are more likely to exhibit cooperative behaviors, which will provide resources and information that can facilitate performance (Nahapiet & Ghoshat, 1998).

The relational dimension of social capital may also have positive effects in terms of organizational efficiency in various ways, including reducing transaction costs (Fussel, Roxrode, Kennan, & Hazleton, 2006). For instance, trust can reduce monitoring costs and allow organizations to operate more efficiently (Cummings & Bromiley, 1996). Based on the literature summarized above, the following hypothesis was tested:

H2: *Relational social capital is positively correlated with police officers' perceived organizational performance.*

3.3. Cognitive Social Capital and Performance

The cognitive dimension of social capital suggests that individuals have similar understandings and interpretations when they use shared codes, language and vocabulary, and narratives regarding tasks and practices in their organizations. According to Cohen and Prusak (2001), the cognitive dimension plays an important role in enhancing knowledge transfer,

promoting organizational learning, and developing norms and values. Storytelling plays a significant role in this regard; workers can informally learn about the organization and their jobs through narratives about failures, successes, and myths. Such exchanges may also create an appropriate environment for information sharing and help the organization develop solutions to present problems from past failures. As mentioned before, storytelling, by developing positive social relationships among individuals within organizations, may function as a social support for colleagues, increasing job satisfaction and motivation (Flop & Volker, 2001). Storytelling may also help develop shared perceptions among colleagues about what their organization should accomplish (Inkpen & Tsang, 2005). Likewise, Tsai and Ghoshal (1998) asserted that individuals developing similar or shared languages, values, and practices may create opportunities to effectively communicate and exchange information by reducing misunderstanding and providing efficient communication. People often use acronyms and specific vocabulary in the workplace to express work-related concepts. As in other organizations, officers in drug law enforcement departments use their own jargon to refer to work procedures and concepts. The extent to which officers share a common professional language influences their problem-solving ability. Furthermore, collective goal orientation occurs in organizations in which colleagues communicate through the same language and interpret organizational events similarly. In addition, shared understanding among individuals is likely to reduce conflict among them and leads individuals to focus more on organizational goals than on individual interests (Adler & Kwon, 2002; Subramaniam & Youndt, 2005). In light of these data, the following hypothesis was tested:

H3: *Cognitive social capital is positively correlated with police officers' perceived organizational performance.*

The studies using this multidimensional model have primarily examined the three dimensions separately. Nahapiet and Ghoshal (1998) suggest that many of the facets of these dimensions are highly interrelated and consider this possible interrelationship among the three dimensions to be an important research focus for future studies. However, although a substantial body of literature exists on the relations between the different components of these dimensions, empirical study investigating the interrelationships between these three dimensions of organizational social capital is lacking.

Close relationships and interactions, which are the main elements of structural social capital, facilitate the development of some facets of cognitive social capital (Boisot, 1995; Orr, 1990). The research has also highlighted the correlation between trust and social interaction and shown that individuals who have trustworthy relationships are more likely to exhibit cooperative interactions and social exchange (Fukuyama, 1995; Putnam, 1995; Ring & Van de Ven, 1994; Tyler & Kramer, 1996). On the other hand, Granovetter (1985) and Krackhardt (1992) suggest that strong ties between individuals are positively associated with interpersonal trust, which is one of the main facets of relational social capital. In addition, a larger number of informal interactions between individuals increases the level of interpersonal trust (Green & Brock, 2005). Therefore, it is reasonable to hypothesize that an intercorrelation exists among the three social capital dimensions. The following hypothesis was developed to test this relationship:

H4: *The three dimensions of organizational social capital are positively correlated with each other.*

Given the multidimensional conceptualization, it is important to ask which dimension of organizational social capital has the strongest effect on organizational outcomes. Since each dimension represents a different aspect of organizational social capital, it is safe to assume that each dimension impacts organizational performance differently. However, a few empirical studies investigate the relative importance of the three dimensions in terms of organizational outcomes. Examining social capital in private-sector organizations, Tsai and Ghoshal (1998) found that social interaction among business units, an important manifestation of structural social capital, more significantly influences information exchange and product innovation than does cognitive social capital. Similarly, they found that trust among work units, a primary indicator of relational social capital, is more influential than cognitive social capital. In addition, using the multidimensional model, O'Shea (2003) found that, compared to the other two dimensions, the relational dimension of organizational social capital has the strongest positive influence on organizational commitment. Based on the literature summarized above, the following hypothesis was developed:

H5: *Among the three dimensions of organizational social capital, relational social capital produces the greatest effect on police officers' perceived organizational performance.*

4. METHODOLOGY

This study aimed to examine organizational social capital in drug law enforcement departments by observing police officers' perceptions about organizational performance. The effect of the three dimensions of organizational social capital on organizational performance was investigated. The possible relationships between these social capital dimensions were also examined.

Based on the previous theoretical and empirical evidence in the literature, five research hypotheses were developed to examine social capital as an important factor in organizational performance. The research hypotheses pertaining to the relationships between the three dimensions of organizational social capital and perceived performance were tested via structural equation modeling.

This section begins by introducing the study variables and their operationalization. A description of the sampling method and data collection procedure are offered. The survey instrument and the rationale in the selection of survey items is also presented and discussed. This section concludes by explaining the data analysis plan, presenting the steps of confirmatory factor analysis and structural equation modeling.

4.1. Study Variables

In this study, four latent variables were developed. The exogenous latent variables included the three dimensions of organizational social capital: the structural, relational, and cognitive dimensions. Each exogenous latent variable consisted of multiple indicators pertaining to social capital, such as level of trust, social interactions, and shared language. One endogenous

latent variable was also constructed and included multiple indicators pertaining to organizational performance, reflected mostly by the perceptions of police officers in drug law enforcement departments.

4.1.1. Social Capital

Previous empirical studies on social capital have used various indicators in measuring social capital. Many researchers have used number of relationships to make their measurements (Bursick, 1999; Burt, 1997; Cross & Cummings, 2004; Robinson & Morash, 2000). Others have operationalized social capital by focusing also on the quality of these relationships and have used strength of ties between individuals (James, 2000; Levin & Cross, 2004; Reagans & McEvily, 2003). Watson and Papamarcos (2002), in addition, included quality of communication and level of interpersonal trust in their study as a proxy for social capital. As discussed in the literature review section, social capital is represented by multiple dimensions. Each dimension, being impossible to observe directly, is a latent construct having multiple indicators. Therefore, multiple indicators should be included in the respective dimensions to enable the development of a valid measurement model.

Nahapiet and Ghoshal (1998) specify three dimensions of social capital: first, the structural dimension concerns the extent to which individuals within an organization are connected with each other; second, the relational dimension involves the quality of the connections between individuals within an organization; and, finally, the cognitive dimension focuses on whether individuals share a common language, interpretation, or understanding. The rest of this section discusses the operational definition of these dimensions as exogenous (predictive) variables, along with their measurements.

A. <u>Relational Social Capital</u>

The relational dimension of social capital refers to the normative quality and characteristics of relationships between individuals in an organization. The main normative qualities are reciprocity, trust, obligation, and group identification.

Woolcock (1998) suggested that trust and norms of reciprocity should be inherent in relationships for the formation of social capital. Putnam (2000) also pointed out the relationship between trust and reciprocity in terms of social capital. When explaining cooperative behavior in the workplace, a number of scholars have put trust at the center of cooperative relations (Hardin, 2002; Miller, 2000; Ostrom, 1998; Uslaner, 2001). On the other hand, Leane and Van Buren (1999) also pointed out a difficulty in developing a research design to examine trust by suggesting that trust is not only necessary for but a product of successful collective action. In their study, interpersonal trust between officers was conceptualized and measured as an indicator of the construct of the relational social capital.

Putnam (2000) viewed reciprocity as an important property of social capital that is interrelated with the concept of trust. The presence of norms of reciprocity in social relationships has been considered an important dimension of social capital, as the reciprocity norm increases cooperative exchanges among individuals, offering beneficial resources for each (Putnam, 2000). Sampson, Morenoff, and Earls (2000) measured reciprocity by looking at the relationship patterns among people in a certain neighborhood and asked questions regarding the extent to which people in the neighborhood did favors for each other. Based on this research, the current study assessed relational social capital in terms of trust, reciprocity, and obligation by including five items in the survey instrument (see Appendix C).

B. <u>Cognitive Social Capital</u>

The cognitive dimension is related to individuals' shared understanding, shared language, and interpretations of organizational events. This dimension may be created through shared language and codes pertaining to work and practice. In addition, it is associated with the mission and vision shared by members in the same organization. The cognitive dimension, an essential component of social capital, provides effective communication between individuals and facilitates information sharing (Bolino, Turnley, & Bloodgood, 2000; Tsai & Ghoshal, 1998).

The cognitive dimension also refers to group cohesion. Since group cohesion is an important force that brings individuals in a group closer to each other, it is assumed that groups indicating a high level of cohesiveness have more social capital. Members within cohesive groups share similar beliefs and norms, and support each other. Researchers often measure group cohesion by looking at the proportion of people who have close relations and the extent to which they have social interaction (Bursick, 1999; Sampson, Morenoff, & Earls, 1999). In addition, some researchers have measured cohesiveness by assessing the perceptions of individuals regarding the similarity among them and how much they have in common (Bursick, 1999). It is assumed that groups within which individuals have close relationships, share similar beliefs, and similar characteristics have a higher level of social capital. Therefore, this study included five items in the questionnaire that measured the perception of cognitive social capital by assessing the extent to which police officers use the same vocabulary or jargon, possess similar interpretations of organizational events, easily communicate with each other, and have the same understanding of organizational goals.

C. <u>Structural Social Capital</u>

The structural dimension of social capital pertains to structural characteristics and patterns of relationships among individuals in an organization. It is associated with how the structure of relationships enhances the linkages and accessibility of members to each other. The structural dimension comprises connections among members and the characteristics of those ties, such as density and position within the network. Frequency of communication between the members of the organization is also considered reflective of the structural characteristics of the relationships (Tsai & Ghoshal, 1998). Whether connections exist between workers and the extent to which they interact with one other are often used as measures of structural social capital (Kilduff & Corley, 2000; Tsai & Ghoshal, 1998). In addition, informal relationships, one of the main indicators of structural dimension, play an important role in fostering social capital within the organization (Danchev, 2006). This dimension can enhance the ability of organization members to access to each other and exchange useful information about their tasks (Nahapiet & Ghoshal, 1998). Five items regarding interactions, informal relations, and connectedness among police officers were used to measure the variable of structural social capital.

Because of time limitations and effort constraints in survey research, it was not feasible for this study to include and examine all the possible elements associated with the three dimensions of social capital proposed by the previous studies. The operational definition and indicators of these exogenous variables are displayed in Table 1.

4.1.2. Organizational Performance

Measurement of performance has always been an important concern in organizational studies. A number of indicators of organizational performance have been used in the assessment

of actual activities and functions. For the purposes of this study, the measurement of organizational performance was based on the perceptions of the police officers working in the drug enforcement departments. Although objective data have traditionally been used in the organizational studies and have been considered less biased (Kim, 2005), objective data are not always available in public organizations, especially in law enforcement organizations. As well, some reliability concerns may exist regarding the objective performance data of drug law enforcement departments, as mentioned in the previous chapter. For drug law enforcement departments in Turkey, very limited objective and quantifiable performance measures are available, and it is very difficult to compare these departments in terms of performance. In addition, as explained in the literature review section, even if some objective data such as number of arrests, retail price of drugs, and amount of drug seized by the departments were available, there is debate on whether these measures reflect actual departmental performance. Therefore, in this study, the survey was designed to measure organizational performance as perceived by police officers in drug law enforcement departments.

A number of empirical studies examining the performance of public organizations have used perceptual measures. In addition, many of these studies have examined organizational performance in public organizations, as this study does (Brewer & Selden, 2000; Chun & Rainey, 2005; Delaney & Huselid, 1996; Pandey, Coursey, & Moynihan, 2004). The use of self-reported and perceptual measures in studies of organizational performance often causes the results to be doubted (Kim, 2005). However, the literature suggests that perceptual measures of organizational performance may be used as a reasonable alternative measure when objective data pertaining to performance are not available (Allen & Helms, 2002; Delaney & Huselid, 1996;

Dollinger & Golden, 1992; McCracken, McIlwain, & Fottler, 2001; Schmid, 2002). According to Maguire (2008), employee surveys are valuable in gauging the perceptions of police officers regarding certain administrative issues and can be used to assess various aspects of police departments. In the literature, it has been argument that self-reported and perceptual measurements of performance are questionable in terms of validity; however, the results of the study conducted by Dess and Robinson (1984) indicated that financial performance measures are strongly correlated with perceptual data. In addition, a positive high correlation between objective and perceptual measures of organizational performance has been found by a number of researchers (Dollinger & Golden, 1992; McCracken, McIlwain & Fottler, 2001; Powell, 1992). In order to develop a working measurement model in terms of validity, a performance measurement (originally developed by Brewer & Selden (2000) and modified by Park et al. (2001)) including multiple items related to each dimension of performance was used in this study. The survey employed the 12 items representing various aspects of organizational performance, such as internal efficiency, internal effectiveness, internal fairness, external efficiency, external effectiveness, and external fairness.

In addition to the 12 perceived performance items, a relatively objective item, *salaryaward*, was added by the researcher to improve the validity of the performance measurement. Similar indicators have been utilized to measure the performance of public organizations by previous studies in the literature (Simon, 1998). Salary award is a kind of monetary incentive used by the TNP to motivate police officers (Beyhan, 2008). The awarding committee, consisting of high-ranking police administrators at TNP headquarters in the capital city, has the authority to grant salary awards. This award is usually granted to officers who have

exhibited outstanding performance or to those who have contributed to successful police

operations conducted by the city police departments. The number of salary awards received by

officers can be increased by the committee when the success of operations in which officers have

participated increases. This evaluation is based on various indicators of police operations, such

as number of arrests, amount of drugs seized, and capability of drug trafficking organizations

dismantled. Even though the salary award has been designed as an individual-level incentive

tool, it has transformed over time into an award used to express appreciation for department-

level efforts, particularly for drug law enforcement. Today, the majority of the salary awards are

granted to officers who have contributed to successful drug operations conducted by city

departments. Therefore, it is reasonable to utilize the salary award as an indicator of

departments' performance.

4.1.3. Control Variables

In order to control other factors that could affect organizational performance, both

individual and organizational-level characteristics were included in the model. It was important

to include officers' personal attributes, such as officer tenure, level of education, and officer

rank, because the measure of organizational performance was based on officers' perceptions.

Some organizational-level control variables, such as organization size and crime rate, were also

used to control for organizational attributes (See Table 1).

Tenure: The literature suggests that a negative relationship exists between years of

experience and productivity in police organizations (Stalans & Finn, 1995). Some of the studies

indicate that less experienced police officers are more productive and work harder than those

who are more experienced (Crank & Kuykendall, 2000; DeJong, Mastrofski, & Parks, 2001). On

the other hand, there may be a relationship between officer tenure and perception of social capital. Research in the policing field indicates that there is a negative relationship between officer tenure and positive work outcomes (Lewis, Rosenberg, & Sigler, 1999). However, there is a lack of strong empirical evidence to explain relationship between officer tenure and social capital. The available evidence suggests that more experienced officers tend to have more negative attitude about their relationships with other officers, and are more reluctant to share information (Lewis, Rosenberg, & Sigler, 1999). Officer tenure was measured by the number of years officers have worked in their respective departments.

Education: The literature provides limited evidence that a relationship exists between level of education and performance in police organizations. Kakar (1998) suggests that police officers with college degrees perform better than others. Furthermore, Kim (2005) found a positive correlation between employees' education level and the perceived organizational performance of government organizations. The causal link between education and social capital has been also examined by social capital researchers. The literature suggests that there is a positive relationship between social capital and education. Social capital is considered a valuable resource that facilitates desirable school outcomes (Coleman, 1988; Teachman, Paasch, & Carver, 1997). On the other hand, it is argued that as people's level of education increases, their social network, one of the main components of social capital, becomes larger (Edwards & Foley, 1997; Moore, 1990; Robinson & Morash, 2000). In the police context, however, the research shows that the relationship becomes negative, meaning that social capital may decrease with higher level of education. Stevenson (1988) suggests that more educated police officers are more

likely to experience social isolation. In this study, level of education was measured by asking the respondents the highest educational degree they had obtained.

Officer Rank: A statistically significant relationship between hierarchical rank of public employees and organizational performance has been found by several organizational studies. Chun and Rainy (2005) found a possitive correlation between the managerial levels of public employees and perceived organizational performance. Similarly, Kim (2005) reported that there is a statistically significant and positive correlation between hierarchical rank and perceived organizational performance. In the current study, the rank of drug law enforcement officers was categorized as three different groups: police officer, sergeant and lieutenant, and captain and higher. Since these three rank categories represent a great majority of the officer population in TNP, the additional upper-level rank categories were not specified in the question.

Department Size: Research shows that the size of an organization may have a significant effect on its structure, process, and performance, but the findings are mixed (Moreland & Levine, 1992; Tsai & Ghoshal, 1998). Tsai (2002) suggested that since large departments have more financial and human resources, they may have more human capital and greater opportunities to develop new knowledge. On the other hand, Moreland and Levine (1992) argued that larger departments tend to experience greater conflict among their members. Coordinating the activities of the members is more difficult for larger groups. In addition, large departments may experience lower level of member satisfaction, which may negatively affect organizational performance. Chun and Rainey (2005) found that organization size negatively affects managerial performance, productivity, and work quality. In the same study, however, they found a positive correlation between organization size and customer service orientation. For the current study, department

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size was measured by the number of full-time police officers working in each drug law enforcement department.

     Crime Rate: This study included several drug law enforcement departments from different geographical areas; therefore each department faced a different number of drug trafficking activities. While some departments, such as those in Istanbul and Izmir, performed more intensely in the jurisdiction in terms of drug cases, others, such as Erzurum and Agri, are located in less busy drug trafficking. To control for the number of drug trafficking activities in the departments' jurisdictions, drug crime rate was included in the study. Crime rate was measured by the number of drug cases in each department within 2009.

Table 1: Operationalization of Study Variables

Variable	Measurement Level	Role	Attribute	Operational Measurement
Organizational Performance	Ordinal	Endogenous	1: Strongly disagree 2: Disagree 3: Not sure 4: Agree 5: Strongly agree	Twelve items pertaining to officers' perception about performance. One item asks the number of salary award received by the officers within last year.
Relational Social Capital	Ordinal	Exogenous	1: Strongly disagree 2: Disagree 3: Not sure 4: Agree 5: Strongly agree	Five items (*Respect, Integrity, Expecttruth, Trust, and Liveuptoword*)
Cognitive Social Capital	Ordinal	Exogenous	1: Strongly disagree 2: Disagree	Five items (*Sharedlanguage, Communicate,*

			3: Not sure 4: Agree 5: Strongly agree	*Sharedinterpret,* *Motivepercept, and* *Sharedvision*)
Structural Social Capital	Ordinal	Exogenous	1: Strongly disagree 2: Disagree 3: Not sure 4: Agree 5: Strongly agree	Five items (*Teamwork, Informal,* *Socializing, Interaction* *and Exchange*)
Officer Tenure	Ordinal	Control	1: Less than 2 Years 2: 3-5 Years 3: 5-8 Years 4: More than 8 Years	Number of years that officers have worked
Education Level	Ordinal	Control	1: High School 2: Two Year College 3: Bachelor of Arts/Science 4: Master of Arts/Science 5: Ph.D.	High School to Ph.D.
Hierarchical Rank	Ordinal	Control	1: Police Officer 2: Sergeant and lieutenant 3: Captain and Higher	Police Officer to Captain and higher
Department Size	Ordinal	Control	1: Less than 50 2: 50 to 99 3: 100 and More	Number of full-time police officers
Crime Rate	Ordinal	Control	1: Less than 50 2: 51 to 200 3: 201 to 500 4: 501 to 1000 5: 1001 and More	Number of drug case

4.2. <u>Design of the Study</u>

4.2.1. Sampling

The research population of this study consisted of police officers of drug law enforcement departments in Turkey. The Department of Anti-Smuggling and Organized Crime (KOM) of the TNP is responsible for drug law enforcement efforts at the national level. It has a centralized structure and coordinates 81 city drug law enforcement departments at the local level. Currently, about 4,000 active police officers work in drug law enforcement departments in Turkey. The units of analysis in the study were police officers who work in 12 different city drug law enforcement departments. To ensure that the samples represent the whole population of drug law enforcement officers, 12 cities (Istanbul, Kocaeli, Ankara, Izmir, Adana, Antalya, Diyarbakir, Gaziantep, Van, Erzurum, Agri, and Yozgat) were selected from various geographical regions in Turkey. For example, Kocaeli was selected from the western part of the country, while Diyarbakir and Van were selected from the eastern region. The southern region was represented by the three cities, Adana, Antalya, and Gaziantep. In addition, the three largest cities of Turkey, Istanbul, Ankara, and Izmir, were also included. The number of samples for each department was proportionately calculated based on the department's total number of personnel.

Istanbul is the financial center of and the largest city in Turkey in terms of population (more than 15 million). The Istanbul drug law enforcement department is the largest department, with about 350 sworn officers. Since the city is located in the north-west region of a country that bonds two continents, Asia and Europe, drug trafficking organizations primarily use this route for the delivery of drugs between Afghanistan, Iran, and European countries (UNODC, 2003). In

addition, the existence of a large number of drug addicts has made Istanbul a crucial city for drug dealers. As a result, a great portion of the drug trafficking activity in Turkey concentrates in this jurisdiction. Istanbul's drug law enforcement department is, not surprisingly, the largest in Turkey in terms of number of drug arrests (4,850 arrests in 2009) and amount of drugs seized (e.g., heroin: 4,605 kg in 2009). In addition to these unique characteristics, its diverse population, which comes from different ethnic, social, and cultural backgrounds, makes Istanbul's drug law enforcement department a valuable site for this study.

Ankara city, the capital of Turkey, is the second largest city in terms of population and is located in the central part of the country. The drug law enforcement department in Ankara is the second largest department in terms of personnel number. Because of its geographical location and department size, Ankara was included in the study. Police officers were selected from the drug law enforcement department of Izmir city to represent the western part of the country. The Izmir drug law enforcement department is the largest in its region, with about 250 sworn officers. Because the city is on the west coast and is close to Europe, it is used along with Istanbul as a kind of gateway to the European countries by drug traffickers. In addition, Kocaeli, located in the northwest, is an important city on the route that major drug trafficking organizations use to move heroin to Istanbul and the European countries.

Adana, Antalya, and Gaziantep are the major cities in the southern Turkey. Because of its higher level of economic development and ethnically diverse population, Adana encounters a relatively higher intensity of drug trafficking activities in this region. Antalya, located on the Mediterranean coast, is the most important international tourism resort of the country.

Particularly during the summer season, it hosts millions of tourists, which also attracts numerous drug dealers.

Diyarbakir, Van, and Erzurum represent the eastern part of the country with their distinct characteristics in terms of ethnic and cultural background. Diyarbakir is the largest city of the region, with a population of two million; its drug law enforcement department is the largest in this region. Van is located at the border of Iran, which is the most important entrance point for drug smugglers from one of the two main heroin production areas, called the Golden Crescent (Afghanistan, Iran, and Pakistan). Afghanistan is reported to be the largest heroine producer in the world (UNODC, 2005). Heroin, one of the most widely consumed illicit drugs in Turkey and the European countries, is produced in Afghanistan and smuggled through Iran and Turkey to consumer countries such as the UK and the Netherlands.

To increase the representativeness of the samples, relatively small departments such as Yozgat and Agri were also included in the study. While Yozgat is located in central Turkey, Agri is in the northeast. The jurisdictions of these two city's drug law enforcement departments are associated with a small number of cases in terms of illegal drug consumption and drug dealing activities (TNP, 2008).

Calculating the number of observations necessary for the study is an important in achieving valid statistical results. It has been recommended that a study have 15 cases per predictor as the sample size for a standard ordinary least squares multiple regression analysis. Based on this calculation, it can be said that 15 cases for each measured variable in an SEM model gives a reasonable sample size (Division of Statistics and Scientific Computation, 2002). It has been argued that the minimum sample size necessary for SEM analyses depends on the

characteristics of the study (Muthén & Muthén, 2002). On the other hand, according to Bentler and Chou (1987), as a rule of thumb, researchers should have five cases for each parameter estimate for SEM analyses. Therefore, the necessary sample size was calculated by multiplying the number of parameter estimates in the model by five. The intended sample size for this study was determined as 500. Since there were 60 parameter estimates in this model, 300 was the minimum sample size for running the proposed model. Because the study reached a sample size of 317, it can be said that the study has enough statistical power for the analysis and generalization of the result. After calculating the number of samples for each city, the samples were randomly selected by using personnel lists obtained from the departments.

4.2.2. Data Collection

A self-reported survey was used in this study. The survey was used to generalize from the sample to a population in order to enable the making of inferences pertaining to the characteristics of an entire population. In addition, surveys can obtain significant information from a large population and are an appropriate way to capture the perceptions of the respondents (Kerlinger & Lee, 2000), which is essential for this study. Organizational surveys have been widely used by both organizational leaders and researchers as important tools for understanding and measuring various aspects of organizational performance and life (Church & Waclawski, 1998; Smith, 2003). By asking questions related to organizational concepts, organizational surveys aim to gather data on workers' perceptions and feelings pertaining to these aspects of organizational settings. In this study, to measure the study variables, data were collected through a self-administered survey (see Appendix C).

The survey instrument is described in the following section. Official permission to collect data and conduct a survey in police departments was granted to the researcher by the General Directorate of TNP (see Appendix B). The study participants were reached by using their e-mail addresses and phone numbers. The addresses of and contact information for the study samples were obtained from the departments. The survey was administered via e-mail by uploading the questionnaire to a web-based survey provider, Surveymonkey. First, survey questions were uploaded to Surveymonkey. Second, the web link to the survey was distributed to 500 police officers via email by using their email addresses. Then the participants were asked to follow the instructions and answer the questions by using this web link. Third, after two weeks, the first follow-up emails were sent to the officers who did not respond. Another follow-up email was sent after four weeks. In addition, to increase the response rate, the questionnaire was also manually distributed to the officers in person through contact officers in each department where internet access was limited. As a result, 30 of the respondents were reached manually.

Though it was difficult to conduct the survey in 12 departments in different provinces, the distribution of the questionnaires via email helped to overcome this obstacle. In addition, accessing the study subjects in different departments was not an important issue because the researcher was an active police major in TNP and had several personal contacts in the selected departments. Participation in the survey was voluntary and all officers' responses were kept anonymous. After the final follow-up emails, 65% of the officers who received the questionnaire had responded. A 65% response rate is considered sufficient for a statistical analysis in the literature (Rubin & Babbie, 2005).

Data used for measuring organizational-level variables were obtained from the records of the city law enforcement departments and the Department of Anti-Smuggling and Organized Crimes. The number of full-time police officers in each department, which was used as the measure of department size, was obtained from the records of these departments (the data was coded as 1: Less than 50; 2: 51 to 120; 3: 121 to 200; 4: 201 to 300; and 5: 301 or more). As mentioned above, the crime rate was measured by the number of drug investigations (cases) conducted by each department during 2009 as a proxy for the drug crime rate in the region. The data on the number of drug cases were obtained from the department records (the data was coded as 1: Less than 50; 2: 51 to 200; 3: 201 to 500; 4: 501 to 1,000; and 5: 1,001 or more). The number of arrests made by the departments was used in the analysis to explore the relationship between perceived (subjective) performance measures and objective performance measures. Arrest number was computed per officer; that is, it was calculated by dividing the total number of arrests made for each department in 2009 by the number of sworn officers in the respective department. The number of drug arrests, used as the objective measure of organizational performance, was obtained from the Department of Anti-Smuggling and Organized Crimes.

4.2.3. Survey Instrument and Reliability

The questionnaire distributed to the participants consisted of three sections. The first section of the survey included questions pertaining to perceived organizational performance. This section was designed to measure the participants' perceptions about organizational performance. The conceptual model of performance measurement proposed by Brewer and Selden (2000) was utilized to measure the perceived performance of drug law enforcement organizations. They divided the dimensions of the performance of public organizations into

internal and external performance. According to this model, each dimension was evaluated based on three performance-related values: efficiency, effectiveness, and fairness. Many of the components of performance examined in the literature, such as productivity and quality of service, were captured in this conceptualization. These components of performance, including efficiency, productivity, quality, fairness, and customer satisfaction, were reflected by twelve items in the survey.

To measure the perceived performance of drug law enforcement departments, the survey of this study used the items that were originally designed by Brewer and Selden (2000) and modified by Park et al. (2001). The same survey items have been used by several researchers (Kim, 2005) to measure the performance of public-sector organizations and have produced a high reliability coefficient score. The survey items were as follows:

Internal efficiency:

1. (Useofskill) *My organization has made good use of my knowledge and skills in looking for ways to become more efficient.*

2. (Reducedcost) *My organization is trying to reduce cost in managing organization and performing works.*

Internal effectiveness:

3. (Productivity) *The productivity of my organization is high.*

4. (Quality) *Overall, the quality of work performed by my current coworkers in my immediate work group is high.*

Internal fairness:

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5. (Fairtreatment) *My organization provides fair and equitable treatment for employees and applicants in all aspects of personnel management without regard to their political affiliation, sex, hometown, marital status, age, or handicapping condition.*

6. (Treatrespect) *In general, all are treated with respect in my organization, with no regard to status and grade.*

External efficiency:

7. (Externrelations) *My organization has conducted business relations with outside customers very promptly.*

8. (Mistakes) *It is rare to make big mistakes in my organization when conducting work.*

External effectiveness:

9. (Worthserv) The *work performed by my organization provides the public a worthwhile return on their tax money.*

10. (Goalattain) *The occurrence of goal attainment is very high in my organization.*

External fairness:

11. (Equitableserv) *My organization provides fair and equitable services to the public, with no consideration of their individual backgrounds.*

12. (Custsatisfact) *Customer satisfaction with my organization is very high.*

The reliability coefficient (Cronbach's alpha) of these survey items was found by Park et al. (2001) to be 0.87, which is adequate. These twelve questions were used to measure the variable of perceived organizational performance by referring to the dimensions of the concept of organizational performance proposed by Brewer and Selden (2000). Previous studies have used similar items to measure organizational performance (Kirkman & Rosen, 1999). For all

items in this section, respondents were asked to indicate the extent to which they agreed with each statement by using a five-point Likert scale (1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, and 5: Strongly Agree).

One item was also added as an indicator of performance: the number of salary awards received by the officers during 2009 (Item #33: *How many salary awards have you received within last year?*). The rationale behind this modification was that including an objective indicator in the measurement model in addition to the perceptual indicators might provide higher measurement validity.

The second section was designed to measure three exogenous latent variables, which are the three different dimensions of organizational social capital in drug law enforcement departments. Survey items reflecting each dimension of organizational social capital were included in this section of the questionnaire. Respondents were again asked to indicate the extent to which they agreed with each statement by using a five-point Likert scale (1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, and 5: Strongly Agree).

In the following section, each item, all of which have been used by several researchers in the literature, was categorized based on its association with the dimensions of the proposed organizational social capital model.

The five-item intra-organizational trust scale, developed by Simons and Peterson (2000), was used to measure the relational dimension of organizational social capital. The scale has produced high internal consistency scores in previous empirical studies (Cronbach's alpha: 0.91) (O'Shea, 2003). The survey questions pertaining to this dimension are as follows:

13. (Respect) *In this department, we respect each other's competencies.*

14. (Integrity) *In this department, every officer shows integrity.*

15. (Expecttruth) *In this department, we expect the complete truth from each other.*

16. (Trust) *In this department, we all fully trust one another.*

17. (Liveuptoword) *In this department, we count on each other to fully live up to our word.*

These items reflect normative patterns such as trust and reciprocity, which were explained in the previous chapter.

Five questions in the survey were asked to measure the cognitive dimension of organizational social capital. The survey questions developed by Tsai and Ghoshal (1998) have been widely used in many organizational studies in the literature to measure cognitive social capital. Three items were added by Giantivo (2007) and showed a high internal consistency score for the scale (Cronbach's alpha: 0.90). The survey questions pertaining to this dimension are as follows:

18. (Sharedlanguage) *In this department, we explain work-related ideas or thoughts using the same kind of vocabulary or jargon.*

19. (Communicate) *In this department, we can easily communicate with each other at work.*

20. (Sharedinterpret) *In this department, we interpret organizational events and experiences similarly.*

21. (Motivepercept) *In this department, we perceive the motives of other officers similarly.*

22. (Sharedvision) *In this department, we share the same vision of what the organization should accomplish.*

These items refer to patterns of cognitive dimension such as individuals' shared understanding, shared language, and similar interpretations pertaining to organizational events, goals, and mission.

To measure the structural dimension of organizational social capital, five items reflecting social interactions among officers were included in this section. Three items were originally developed by Nielsen et al. (2004) and showed a high internal consistency score (Cronbach's alpha: 0.89). Two items adapted from Tsai and Ghoshal (1998) were added to the questionnaire. The survey questions pertaining to this dimension are as follows:

23. (Teamwork) *I am able to work with my coworkers to collectively solve problems.*

24. (Informal) *In this department, I have the chance to talk informally with and visit others.*

25. (Socializing) *I socialize with coworkers outside the workplace.*

26. (Interaction) *I often talk to coworkers about work-related issues.*

27. (Exchange) *I exchange job-related experiences with other workers.*

These items reflect the qualities of social relationships and the density of social interactions among officers that determine the structural dimension of social capital.

The third section was structured to collect information pertaining to the demographic characteristics of the respondents, including tenure, education level, and officer rank. The highest degree that participants had completed was asked to measure their levels of education. Police officers' responses for education level were categorized into five groups (1: High School, 2:

Two-Year College, 3: Bachelor of Arts/Science, 4: Master of Arts/Science, and 5: Ph.D.). In the literature, officer tenure has usually been defined as the number of years the participant officers have worked in the department. Therefore, how long the participants have been in the narcotics department of the TNP was asked to measure officer tenure. Responses for this question were categorized into four groups (1: Less than 2 Years, 2: 3-5 Years, 3: 5-8 Years, and 4: More than 8 Years). Officer rank was measured on a three-point scale, ranging from "Police officer" to "Sergeant and Lieutenant" to "Captain and Higher."

Since the survey was conducted in drug law enforcement departments in Turkey, the questionnaire was translated into Turkish. After the translation, to avoid possible flaws, the Turkish version of the survey was reviewed by Sedat Kula, who is fluent in the both languages and a captain in the TNP. He is also a doctoral student in the Public Affairs Program at the University of Central Florida.

4.2.4. Human Subjects

Obtaining the Institutional Review Board's (IRB) approval was required before starting the study because human subjects participated in the study. Before starting the survey, approval was granted by the UCF Institutional Review Board with the IRB number SBE-09-06513. The UCF Institutional Review Board was satisfied that the activities in this research indicated no risk for the participants and that the study was exempt from regulation. Participating in the study was voluntary, meaning that police officers were not forced to participate in the survey. All information and explanations pertaining to the study were provided, and there was no possible risk to the subjects' rights and interests.

The confidentiality of the information obtained from the subjects is another important issue for all human subject research. In this study, the participants' identities were kept anonymous, meaning that there was no question about their names and identity in the survey. In addition, they were assured that their personal information would not be revealed to the public. As well, all information gathered from the participants was stored securely.

4.3. Statistical Analysis Method

In this study, Structural Equation Modeling (SEM), a multivariate statistical analysis technique, was used to investigate the relationship between the three dimensions of organizational social capital and performance of drug law enforcement organizations. Many studies, particularly those in the behavioral sciences, increasingly use SEM as a statistical method (Hox & Becher, 1998). SEM allows researchers to simultaneously predict multiple outcome variables from multiple predictors or exogenous variables in the same model, while only one endogenous variable is allowed in a model in regression analysis. This is an important advantage of SEM, which also enables researchers to investigate the interrelationships between latent and observable variables in complex models (Byrne, 2001; Wan, 2002). The rationale behind the selection of SEM for the current study is as follows: First of all, this study was a confirmatory research study that aimed to confirm theoretically informed research hypotheses deduced from previous theoretical and empirical results in the literature. SEM is considered an appropriate statistical analysis method for testing the hypotheses in confirmatory researches. Furthermore, the study included latent constructs, such as social capital, that are not directly observable and that consist of multiple indicators. AMOS 16 was used as the statistical software for the SEM analysis. SPSS was used for the other statistical analyses in the study.

Using SEM, the theoretically informed model that was specified based on the literature was assessed for validation. The model validation consisted of two steps: validation of the developed measurement models and validation of the covariance structure model (Wan, 2002). The first step involved validating the measurement models for exogenous and endogenous latent variables. After validating the measurement model, in the second step, by including all variables in the model, the structural model was validated to test whether our structural equation model explains the performance of drug law enforcement organizations with the given exogenous variables.

4.3.1. Measurement Models: Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) was used to develop and validate the measurement models for the latent variables in the study. Confirmatory factor analysis is "an extension of factor analysis in which specific hypotheses about the structure of the factor loadings and inter-correlations are tested" (StatSoft, 2007). Unlike in exploratory factor analysis, the measurement models are built in advance and the relationships between observed and latent variables are specified in CFA. With CFA, the validity of the theoretically specified measurement models for the latent variables is evaluated by including multiple observable indicators in the models (Wan, 2002). In CFA, the relationships between a set of observed variables (indicators) and latent constructs are examined in the measurement models (Brown, 2006). In addition, unlike regression analysis, SEM takes into account measurement errors of study variables. It is not assumed that latent variables "completely explain the observed variation; each observed variable is associated with a residual error term" (Hox & Becher, 1998, p. 2). Furthermore, CFA allows

researchers to use purposeful limitations on the measurement model, which is considered one of the most important advantages of CFA over exploratory factor analysis (Wan, 2002).

Four latent variables were included in the model: three dimensions of organizational social capital and the perceived performance of drug law enforcement departments. Since these latent variables were difficult to measure with a single indicator and were not directly observable, the measurement models were developed for each latent construct by using multiple observable variables (indicators).

The model employed three exogenous latent variables. As described in the previous section, fifteen questions in the survey questionnaire encompassing each of the three dimensions of organizational social capital were used to gauge respondents' perceptions about the dimensions of social capital. The first exogenous latent variable is relational social capital, which is one of the three dimensions of organizational social capital. Five indicators were included in this model to measure relational social capital (Figure 2). The measurement model for the second exogenous latent variable, cognitive social capital, consisted of five indicators (Figure 3). As well, five indicators were used to measure structural social capital, the third exogenous latent variable in the model (Figure 4).
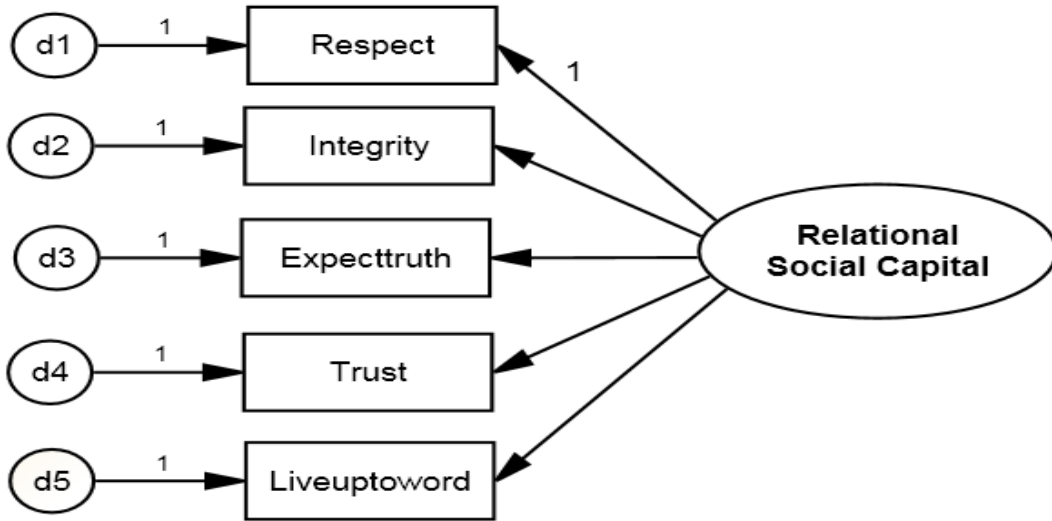
Figure 2. A Measurement Model of Relational Social Capital
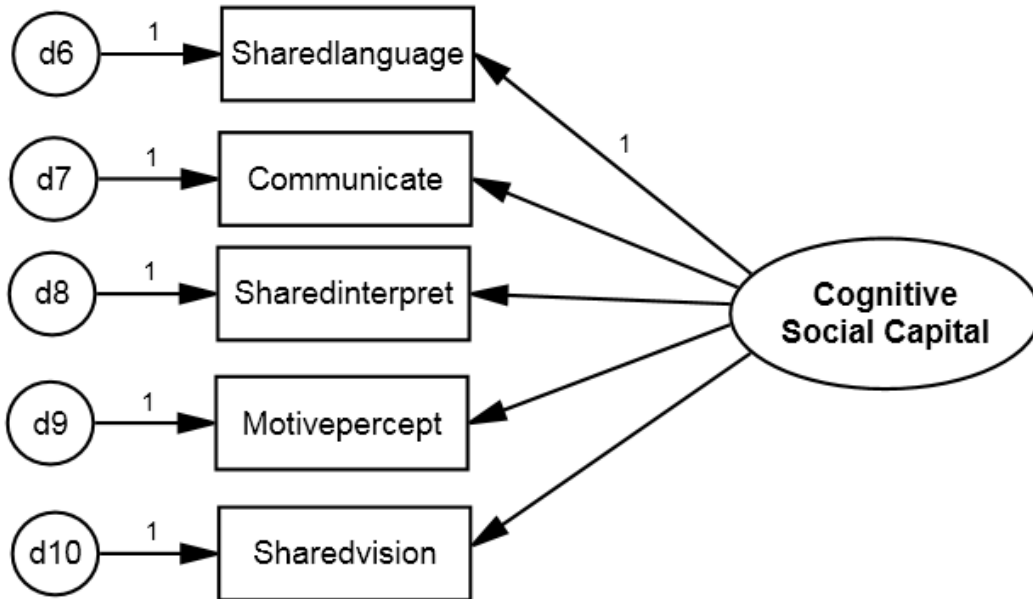
Figure 3. A Measurement Model of Cognitive Social Capital
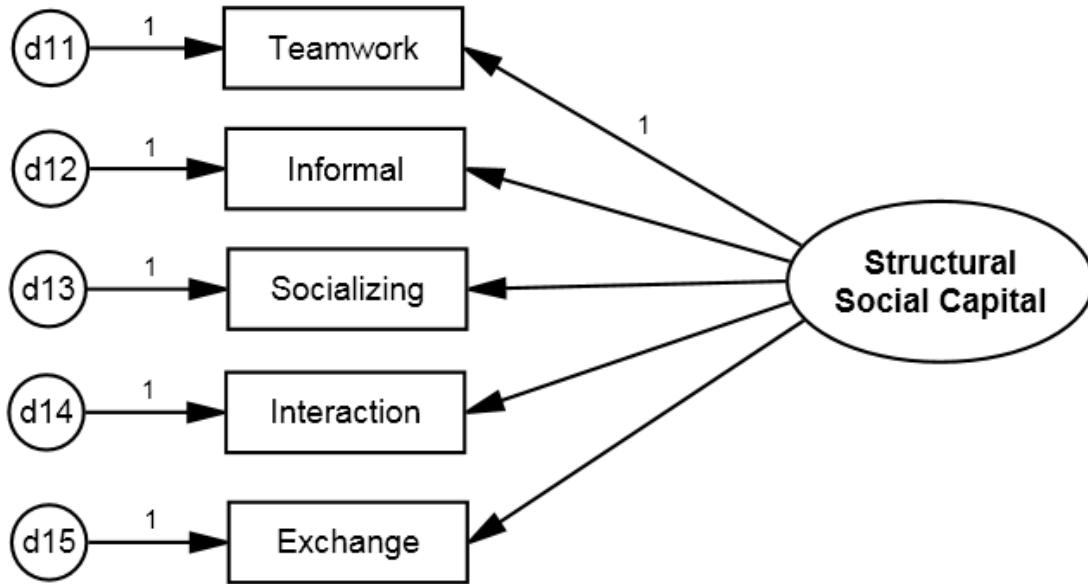
Figure 4. A Measurement Model of Structural Social Capital

The fourth latent variable is the performance of drug law enforcement departments, which is the endogenous variable. Since performance is a multidimensional construct, the measurement model included several indicators that reflect various aspects of organizational performance, such as efficiency, effectiveness, fairness, and quality. For this measurement model, thirteen indicators represented by thirteen questions in the survey were included (Figure 5).
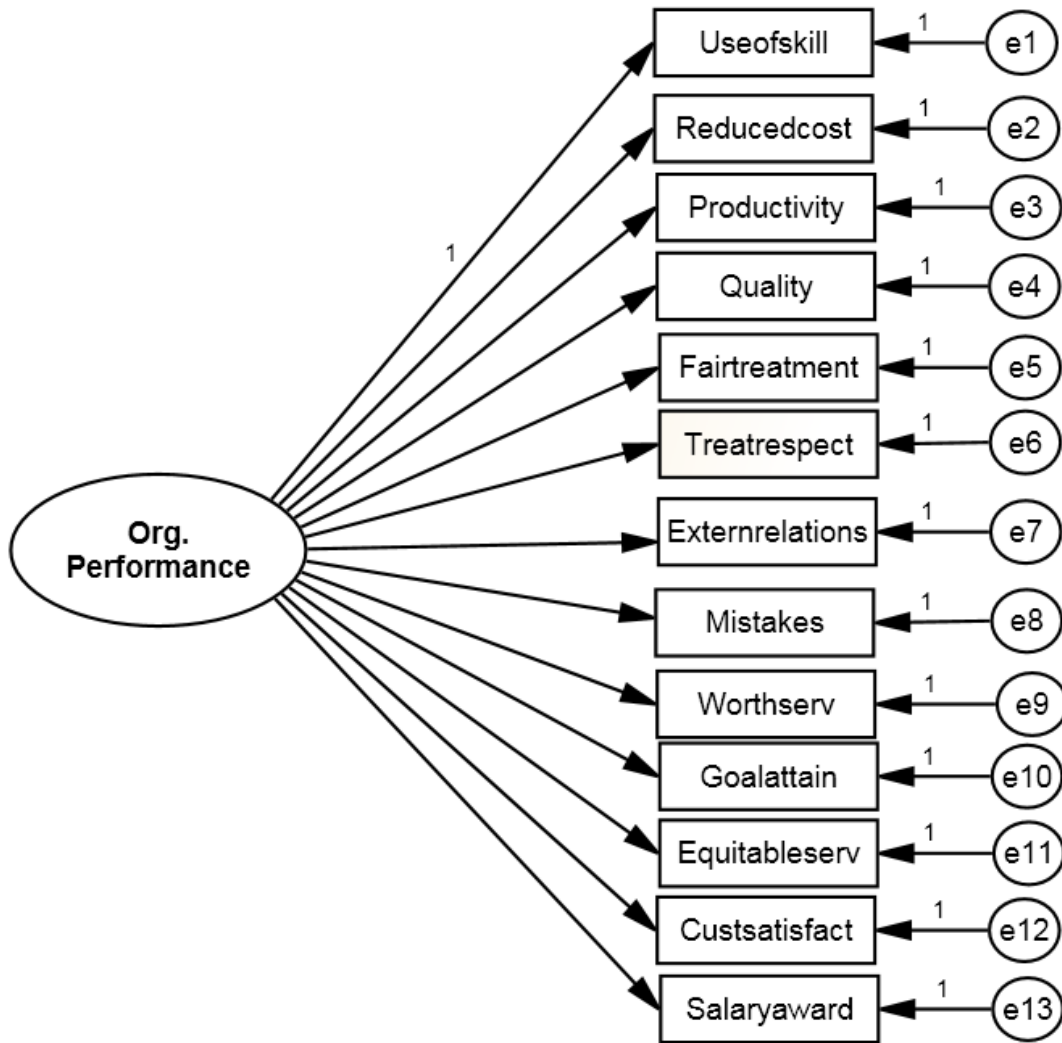
Figure 5. A Measurement Model of Perceived Organizational Performance

For each latent variable, one measurement model was developed and tested to evaluate its

validity via CFA. One indicator was selected as a scale factor and assigned a regression weight

of 1 to the factor loading in order to derive estimates of other factor loadings (Wan, 2002).

Factor loading scores were produced by AMOS for all the indicators of the latent variables in the

model. Factor loadings are defined as "the regression slopes for predicting the indicators from

the latent factor" (Brown, 2006 p. 53). A stronger factor loading means that the influence of that

indicator on the latent variables is stronger. The relative importance of the indicators of organizational social capital and performance of drug law enforcement departments was also compared.

When conducting CFA, goodness-of-fit statistics scores were produced by AMOS to judge whether the measurement models fit the data. Various criteria have been suggested to evaluate the goodness of fit of the models. These criteria are described and discussed in detail in the next section. Once reasonably good goodness-of-fit statistics scores were achieved for the model, these measurement models were used in the structural equation modeling (SEM) analysis.

4.3.2. Covariance Structural Equation Model (SEM)

In this part, the covariance structure model was developed by including the exogenous latent variable, endogenous latent variable, and control variables in the model (Figure 6) to investigate the structural relationship between the three dimensions of organizational social capital (exogenous latent variables) and the performance of drug law enforcement departments (endogenous variables). Based on the literature, it is hypothesized that a higher level of relational, cognitive, and structural social capital among individuals in an organization is associated with a higher level of organizational performance in drug law enforcement departments. As with the CFA analysis, various goodness-of-fit parameter produced by AMOS were analyzed to evaluate the overall goodness of fit of the proposed model. Using goodness-of-fit statistics produced by AMOS and the evaluation criteria, the study assessed whether the SEM model fits well to the data and whether the model is valid for explaining the relationship between organizational social capital and the performance of drug law enforcement departments.

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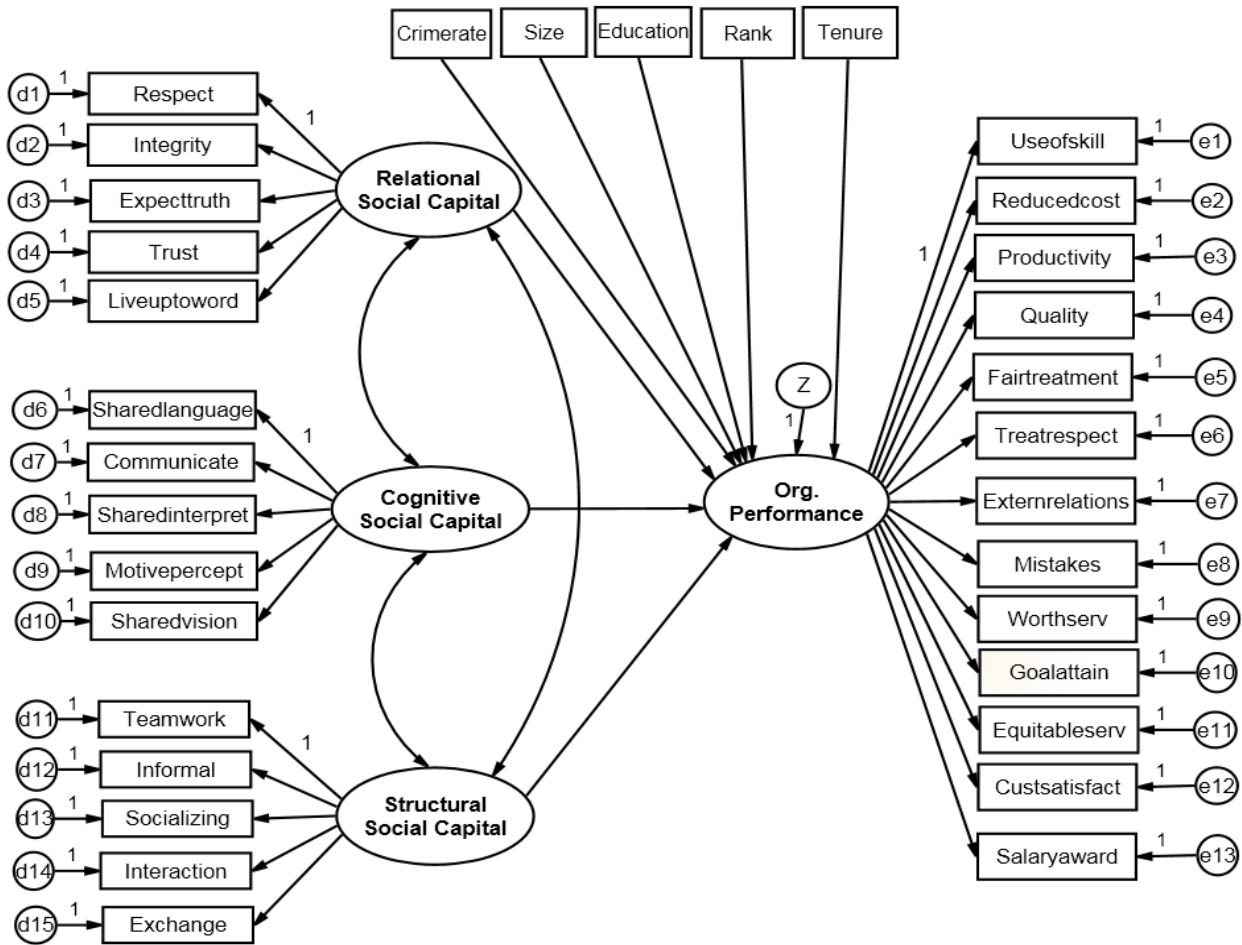
Figure 6. An SEM Model of Organizational Social Capital and Org. Performance

4.3.3. Criteria for the Statistical Analysis

Significance Level: Determining the significance level is important for statistical analyses in all quantitative studies. The significance level functions as a criterion by which to judge whether or not the null hypothesis should be rejected when testing the research hypotheses. The significance level refers to the probability of making a Type 1 error, which is the chance of "rejecting the null hypothesis when it is true" (Mendenhall, Beaver, & Beaver, 2001, p. 278). In

other words, it is the probability of wrongfully rejecting a true null hypothesis. For this study the significance level was set at .05, meaning that the probability of rejecting the true null hypotheses in the study is 5%. This score is also called the p value. A p value lower than .05 indicates 95% confidence that any set of samples drawn from the target population will give the same results. As a result, any statistical results produced in this study with a p value lower than .05 were considered to be statistically significant.

Reliability Level: Reliability pertains to the stability or consistency of the measurement. Reliability is one of the most important requirements for any survey instrument. It is defined as "the consistency of measurement either across occasions or across items designed to measure the same construct" (Groves et al., 2004 p. 262). Reliability can be tested in different ways using various tests such as test-retest, inter-rater, and split half methods. A Cronbach's alpha score ranging from 0 to 1 is the most widely used criterion that assesses the extent to which a measurement produces consistent results at different times (Cronbach, 1951). The split half test produces the Cronbach's alpha score, also known as the reliability coefficient score. Cronbach's alpha is defined as "the average value of the reliability coefficients one would obtain for all possible combinations of items when split into two half-tests" (Gliem & Gliem, 2003, p. 84).

In this study, Cronbach's alpha was used to assess the internal consistency of the multi-item measurement models. For this study, .70 was set as the minimum necessary alpha score for the assessment of measurement reliability. While some researchers suggest that a set of items indicating a Cronbach's alpha score higher than .80 is acceptable in terms of internal consistency, others accept alpha scores higher than .70 as sufficient for reliability (Morgan, 2004).

Criteria for Factor Loadings and SEM: In SEM analyses, goodness-of-fit tests are used to determine the extent to which the model is acceptable. To evaluate the goodness of fit of the measurement models and the SEM model, some goodness-of- fit parameters produced by AMOS were reported for confirmatory factor analysis (CFA) and SEM analysis in this study. Goodness-of-fit tests do not indicate whether all path coefficients in the model being tested are significant. After achieving a good-fit model, interpretations can be made and each path coefficient in the model can be assessed based on its significance levels.

AMOS produces a number of goodness-of-fit scores for various tests; however, it is not feasible to report all of them. There is no agreement among researchers regarding which goodness-of-fit test scores to report. In this study, therefore, the most widely used model fit statistics were reported. First, the chi-square fit index was assessed. This is one of the most commonly used goodness-of-fit tests. This index determines whether there is a significant difference between the covariance structure of the hypothesized model and the observed covariance. In contrast to other statistical procedures, researchers aim to find an insignificant chi-square value (Kline, 2005). In other words, the probability value of the chi-square test should not be smaller than the significance level (.05) in order to conclude that the specified models fit the data well (Arbuckle, 2006). It means that the null hypothesis should not be rejected. However, it is important to be careful when interpreting chi-square test results because these results are significantly affected by sample size. When the sample size is large, the chi-square value tends to be significant even if there is only a small difference between the covariance structure of the hypothesized model and the observed covariance matrix (Byrne, 2001). Therefore, it is recommended that along with the chi-square test, other goodness-of-fit tests also be used for

assessment. Goodness of fit can also be evaluated based on the chi-square value (χ^2) and the degree of freedom (df). The chi-square ratio is calculated by dividing the chi-square value by the degree of freedom (χ^2/ df). Chi-square ratios lower than 4.0 indicate an acceptable fit.

In addition to the probability value of the chi-square index and chi-square ratio, other goodness-of-fit parameters, such as the goodness-of-fit index (GFI), adjusted GFI (AGFI), root mean squared error of approximation (RMSEA), comparative fit index (CFI), Tucker- Lewis Index (TLI), and Hoelter's Critical N (CN) scores, were also used to validate the measurement models. GFI is "a measure of the relative amount of variance and covariance in the sample data that is jointly explained by the hypothesized model" (Kline, 2005, p. 77). The difference between GFI and AGFI is that the number of degrees of freedom in the model is taken into account when calculating AGFI. GFI and AGFI are "classified as absolute indices of fit because they basically compare the hypothesized model with no model at all" (Kline, 2005, p. 77). On the other hand, the comparative fit index (CFI) compares the given model fit with the independence model in which the variables are considered to be uncorrelated.

GFI, AGFI, CFI, and TLI values range from 0 to 1.00. According to rules of thumb, values higher than .90 are considered to be indicatives of a good fit. On the other hand, the RMSEA score should be lower than .05 for a good model fit. The final goodness-of-fit statistic is Hoelter's critical N, which evaluates the sample size for the model and estimates a sufficient sample size for the chi-square test. There are other parameters used for assessing goodness of fit; however, those described above are the most widely used goodness-of-fit statistics for model validation in SEM analyses.

In addition to the model fit statistics, the p value was used to determine whether factor loadings for the indicator variables in the measurement models and the relationships between latent variables specified in the SEM model were statistically significant. Factor loadings (also called pattern coefficients)   are "the regression slopes for predicting the indicators from the latent factor" (Brown, 2006, p. 53). These coefficients indicate the extent to which the indicators have loadings on the associated latent constructs (Kline, 2005). The parsimony principle is important in SEM analyses, meaning that the number of parameters in a model should be reduced as much as possible. Kline (2005) suggested that "given two different models with similar explanatory power for the same data, the simpler model is to be preferred" (p. 136). Therefore, following the principle of parsimony, indicators with high factor loading scores were retained in the models to simplify them. A threshold for factor loadings was set at .30 for this study, meaning that the indicator variables with factor loadings lower than .30 were eliminated from the models.

As a result, insignificant and weak factor loadings were dropped from the model. Where the model did not fit the data well, further revisions were made to improve model fit. Using the modification indices (MI) produced by AMOS, the measurement errors of factor loadings were correlated with each other where needed to obtain a better fit.

5. FINDINGS

5.1. <u>Descriptive Statistics</u>

For this study, 500 police officers from different drug law enforcement departments in 12 regions were reached by using their email addresses, phone, and contact persons in each department. Of the 500 subjects that were reached, 326 officers responded to the questionnaire, which was 65% of the total number of contacted subjects. A response rate of 65% is adequate because a survey response rate of 50% or higher is considered sufficient for analysis (Rubin & Babbie, 2005). Nine respondents who did not answer more than 30% of the survey questions were eliminated. Other missing values were replaced with the most frequent responses of other participants. The data collection process resulted in the final data set, which consisted of 317 responses. As discussed in the methodology section, there are various rules of thumb for and different approaches to the necessary sample size for SEM analyses in the literature. For example, Bentler and Chou (1987) suggested that researchers should have five cases for each parameter estimate for an SEM analysis. Following this rule of thumb, therefore, the necessary sample size was calculated by multiplying the number of parameter estimates in the model by five. Three hundred was the minimum sample size determined to be able to test the proposed model. Thus, given the questionnaire's 317 responses, it can be said that the study has a large enough sample size for the analysis. Furthermore, to ensure that this sample size is adequate for the study, Hoelter statistics produced by AMOS were evaluated. Hoelter statistics indicate whether a sample size used in a study is large enough to be able to estimate goodness of fit and other parameters in an SEM model (Schumacker & Lomax, 1996). Therefore, AMOS outputs for

each measurement and SEM models that display Hoelter statistics are presented in the next section.

The descriptive analysis section consisted of frequency analysis and the results of bivariate correlation analysis of the observable variables (indicators). In the first part, using frequency tables, individual and organizational-level characteristics that constituted control variables were discussed based on the frequency of the responses to all questions. The other parts included the frequency of the responses to the questions pertaining to the indicators of both exogenous variables and endogenous variable. Correlation matrices were presented and used to discuss bivariate relationships between the control variables and the indictor variables. In addition, correlation matrices were also created to explore the intercorrelations between indicator variables for each latent variable.

5.1.1. Control Variables

In this study, the distribution of 317 respondents by 12 city drug law enforcement departments is presented in Table 2. Though the study targeted 14 departments, two, Malatya and Kahramanmaras, were eliminated because no subject from these cities responded to the survey questions. The largest participation in the survey occurred in Istanbul city, with 71 responses that represented 22.4% of total responses. This weighting of responses is not surprising given that Istanbul's drug law enforcement department is the largest one in the country in terms of personnel numbers. Furthermore, the number of police officers that were contacted for the survey in this department was higher than those in the others because these numbers were proportionately calculated based on the departments' total personnel numbers.

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Table 2: The Frequency Distribution of Responses by Department

		Attribute	Frequency	Percent	Cumulative Percent
Department	1	Istanbul	71	22.4	22.4
	2	Ankara	18	5.7	28.1
	3	Izmir	16	5	33.1
	4	Adana	34	10.7	43.8
	5	Antalya	9	2.8	46.7
	6	Kocaeli	17	5.4	52.1
	7	Erzurum	37	11.7	63.7
	8	Diyarbakir	30	9.5	73.2
	11	Gaziantep	33	10.4	83.6
	12	Agri	24	7.6	91.2
	13	Van	14	4.4	95.6
	14	Yozgat	14	4.4	100
		Total	317	100	

As displayed in Table 20 (see Appendix D), 317 respondents were distributed into five categories in terms of organizational-level characteristics such as department size (measured by the number of sworn officers) and crime rates (measured by average number of drug cases in the last year). Three variables in the study functioning as control variables reflected the individual characteristics of the survey respondents, such as education level, hierarchical rank, and year of service. The majority of the respondents had either a two-year college degree (119) or a bachelor's degree (156), constituting 87% of respondents combined, while 30 respondents were high school graduates, constituting 9.5% of the respondents. It is important to note that almost fifty percent of the respondents were bachelor's degree holders, as the percentage of bachelor's degree holders among TNP officers was less than 10% just ten years ago. Even though police officers working in drug law enforcement departments do not perfectly represent the whole

population of the TNP, it can be concluded that the project initiated by the Turkish government to increase the education level of police officers a decade ago has started producing the desired results. Under the new policy, which started in 2001, new TNP recruits are required to have a two-year college degree and encouraged to pursue their bachelor's degree (Beyhan, 2008).

The survey result indicates that a great majority of the respondents were police officers (83.6%). According to the distribution of the respondents in terms of hierarchical rank, while 265 respondents were police officers, 28 respondents were captains or higher, followed by 24 respondents who were sergeants or lieutenants, constituting 8.8% and 7.6% of the respondents respectively. This statistic is consistent with the distribution of the whole population of officers in drug law enforcement departments in terms of hierarchical rank. A detailed presentation and discussion of the descriptive statistics of control variables can be found in Appendix D.

5.1.2. Predictor Variables

This study included three exogenous latent variables—relational, cognitive, and structural social capital—that were employed as the predictors in the conceptual model. Each latent variable, constituted by five observable variables (indicators), was analyzed based on descriptive statistics associated with each indicator in order to elucidate their distributional characteristics. Important findings from the correlation matrices were also discussed in this section.

<u>Relational Social Capital</u>

The relational dimension of social capital, which refers to the normative qualities and characteristics of relationships between police officers in a department, was measured by five indicators. These indicators, which reflect normative qualities such as reciprocity, trust, and

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obligation, were represented by five items in the questionnaire. As discussed in the previous

sections, trust is the most important norm related with social capital and is widely used as a

proxy for social capital. All items in this part of the survey reflect various aspects of

intraorganizational trust. Respondents were asked to indicate the extent to which they agreed

with each statement representing these normative qualities of their relationships by using a five-

point Likert scale that ranged from "Strongly Disagree" to "Strongly Agree."

Table 3: The Frequency and Percentage Distributions of Relational Social Capital

Variable		Attribute	Frequency	Percent	Cumulative Percent
Respect	1	Strongly Disagree	3	0.9	0.9
	2	Disagree	28	8.8	9.8
	3	Neutral	168	53	62.8
	4	Agree	83	26.2	89
	5	Strongly Agree	35	11	100
		Total	317	100	
Integrity	1	Strongly Disagree	3	0.9	0.9
	2	Disagree	22	6.9	7.9
	3	Neutral	43	13.6	21.5
	4	Agree	159	50.2	71.6
	5	Strongly Agree	90	28.4	100
		Total	317	100	
Expecttruth	1	Strongly Disagree	0	0	0
	2	Disagree	5	1.6	1.6
	3	Neutral	8	2.5	4.1
	4	Agree	142	44.8	48.9
	5	Strongly Agree	162	51.1	100
		Total	317	100	
Trust	1	Strongly Disagree	3	0.9	0.9
	2	Disagree	28	8.8	9.8
	3	Neutral	103	32.5	42.3
	4	Agree	144	45.4	87.7
	5	Strongly Agree	39	12.3	100
		Total	317	100	
Liveuptoword	1	Strongly Disagree	20	6.3	6.3

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2	Disagree	52	16.4	22.7
3	Neutral	149	47	69.7
4	Agree	57	18	87.7
5	Strongly Agree	39	12.3	100
	Total	317	100	

As displayed in Table 3, when it came to relational social capital, most respondents

agreed with the statements pertaining to the normative domain of social capital, except for the

one that asks about officers' *sense of respect for others' competencies* (Item #13). The majority

of the respondents (78.6%) either agreed or strongly agreed with the item assessing their

organization-wide *perception about the integrity of officers* (Item #14). The third item assessed

the respondents' perceptions about *expectations of truthfulness* (Item #15). A great majority of

the officers (162) strongly agreed that they expected the complete truth from others, with a

percentage of 51%. Of the total respondents, 144 respondents agreed with the indicator *In this*

department, we all fully trust one another (Item #16), which assessed officers' perceptions of

interpersonal trust. The frequency table indicates that 57.7% of the respondents reported that

they fully trust other officers in their departments.

To explore how each indicator variable varies by control variables, a correlation matrix

was created. According to the correlation table (see Appendix D), which displays the

relationships between the control variables and indicators of relational social capital, two control

variables, crime rate and tenure, are significantly correlated with level of trust. There is a

statistically significant and negative correlation (r: -.128) between crime rate measured as the

average number of drug cases per year and level of interpersonal trust as perceived by officers.

Respondents from the departments with a greater number of drug cases reported a lower level of

interpersonal trust. This result indicates that officers working in departments that were busy and bore higher work load did not have the opportunity to socially interact with each other and could not develop trusting relationships. Therefore, they might perceive a lower level of trust in their departments. There is also a significant and positive relationship (r: .136) between respondents' year of service and trust level. As officers' years of service in their departments increase, they perceive a higher level of trust. This result is not surprising: interpersonal trust is to a large extent developed by long-lasting interactions among individuals. It is expected that officers who work for a long time in a same department are more likely to have trustworthy relations with their peers.

Cognitive Social Capital

Five questions were asked to measure the cognitive dimension of organizational social capital. These items reflect patterns of cognitive dimension such as respondents' shared understanding, shared language, and similar interpretations pertaining to organizational events, goals, and mission. As before, respondents were asked to rate the extent to which they agreed with each statement by using a five-point Likert scale.

Table 4: The Frequency and Percentage Distributions of Cognitive Social Capital

Variable		Attribute	Frequency	Percent	Cumulative Percent
Sharedlanguage	1	Strongly Disagree	7	2.2	2.2
	2	Disagree	45	14.2	16.4
	3	Neutral	36	11.4	27.8
	4	Agree	169	53.3	81.1
	5	Strongly Agree	60	18.9	100
	Total		317	100	
Communicate	1	Strongly Disagree	3	0.9	0.9

	2	Disagree	35	11	12
	3	Neutral	32	10.1	22.1
	4	Agree	181	57.1	79.2
	5	Strongly Agree	66	20.8	100
	Total		317	100	
Sharedinterpret	1	Strongly Disagree	8	2.5	2.5
	2	Disagree	74	23.3	25.9
	3	Neutral	63	19.9	45.7
	4	Agree	140	44.2	89.9
	5	Strongly Agree	32	10.1	100
	Total		317	100	
Motivepercept	1	Strongly Disagree	15	4.7	4.7
	2	Disagree	68	21.5	26.2
	3	Neutral	67	21.1	47.3
	4	Agree	136	42.9	90.2
	5	Strongly Agree	31	9.8	100
	Total		317	100	
Sharedvision	1	Strongly Disagree	6	1.9	1.9
	2	Disagree	36	11.4	13.2
	3	Neutral	52	16.4	29.7
	4	Agree	187	59	88.6
	5	Strongly Agree	36	11.4	100
	Total		317	100	

Over 50% of the respondents agreed with all the statements representing the indicators of this latent construct (see Table 4). The first indicator, *sharedlanguage* (Item #18), was designed to measure the extent to which officers use same vocabulary or language to express things in the workplace. Of the 317 respondents, 229 respondents (with a cumulative percentage of 72.2%) reported that they used the same vocabulary or jargon for explaining work-related thoughts. Only 16.4% of all respondents either disagreed or strongly disagreed with this indicator. The fifth indicator (*sharedvision*) (Item #22) was developed to emphasize the extent to which the officers in the department agree upon what the organizational goal should be. Of the respondents, 223

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either agreed or strongly agreed with this item, meaning that majority of the officers reported that they shared the same perception of organizational goal.

The correlation matrix indicates that there is no statistically significant relationship between the five control variables and the indicators of cognitive social capital.

Structural Social Capital

The structural dimension of social capital, the third exogenous latent variable in the study, reflects the structural characteristics of relationships between officers in a department. As discussed before, whether connections exist between individuals and the extent to which they interact with one other are often used as the measures of the structural social capital (Kilduff & Corley, 2000; Tsai & Ghoshal, 1998). Therefore, five items representing the officers' perceptions about frequency of interactions, informal relations, and connectedness within their respective departments were utilized to measure the variable of structural social capital (Table 5).

Table 5: The Frequency and Percentage Distributions of Structural Social Capital

Variable		Attribute	Frequency	Percent	Cumulative Percent
Teamwork	1	Strongly Disagree	10	3.2	3.2
	2	Disagree	29	9.1	12.3
	3	Neutral	30	9.5	21.8
	4	Agree	183	57.7	79.5
	5	Strongly Agree	65	20.5	100
	Total		317	100	
Informal	1	Strongly Disagree	9	2.8	2.8
	2	Disagree	31	9.8	12.6
	3	Neutral	29	9.1	21.8
	4	Agree	169	53.3	75.1
	5	Strongly Agree	79	24.9	100
	Total		317	100	
Socializing	1	Strongly Disagree	6	1.9	1.9

	2	Disagree	42	13.2	15.1
	3	Neutral	35	11	26.2
	4	Agree	191	60.3	86.4
	5	Strongly Agree	43	13.6	100
	Total		317	100	
Interaction	1	Strongly Disagree	31	9.8	9.8
	2	Disagree	68	21.5	31.2
	3	Neutral	38	12	43.2
	4	Agree	141	44.5	87.7
	5	Strongly Agree	39	12.3	100
	Total		317	100	
Exchange	1	Strongly Disagree	16	5	5
	2	Disagree	55	17.4	22.4
	3	Neutral	33	10.4	32.8
	4	Agree	166	52.4	85.2
	5	Strongly Agree	47	14.8	100
	Total		317	100	

The majority of the respondents (169) reported that they had informal interactions with other officers (*informal*) in their departments, with a percentage of 53.3% (Item #24). The third indicator (*socializing*) was included to explore the level of social interaction between officers after work. This item (Item #25) was either agreed or strongly agreed with by most of the respondents, with percentages of 60.3% and 13.6% respectively. However, compared to other indicators of structural social capital, the number of respondents who either disagreed or strongly disagreed with the indicator of *interaction* (Item #26) was higher, with a percentage of 31.3% (99). This statistic means that the respondents rated their level of interactions regarding work-related issues with lower scores.

Table 29 (see Appendix D) shows the relationships between indicators of structural social capital and control variables. The results indicate that department size is negatively related to two indicators (*informal* and *socializing*) of structural social capital. The correlation scores

indicate that respondents in larger departments reported that they had less chance to talk informally with others in the workplace. Likewise, respondents from larger departments are less likely to interact with each other after working hours. Similar relationships exist between crime rate and these two structural social capital indicators. When crime rates increased in jurisdictions, respondents reported lower levels of informal talk in work places and a lower level of after-work socializing. On the other hand, the education level and rank of the respondents were positively correlated with three indicators of structural social capital (*teamwork*, *interaction*, and *exchange*). As respondents' education levels and ranks increased, they were more likely to report higher level of interaction regarding work-related issues. They also reported that they worked collectively to solve problems and exchange work-related experience with others. Ranked officers perceived a higher level of teamwork and exchange. A possible explanation may be that higher ranked officers rely more on collective action because they are more likely to bear the responsibility of coordinating their subordinates and getting jobs done.

5.1.3. Outcome Variable

Organizational performance, the endogenous latent variable, was to a large extent based on the perceptions of the police officers working in drug law enforcement. The questionnaire employed twelve items reflecting various aspects of organizational performance as perceived by police officers, such as internal efficiency, internal effectiveness, internal fairness, external efficiency, external effectiveness, and external fairness. Since perception data have sometimes been considered biased, to improve the validity of the measurement model for organizational performance a relatively objective indicator, *salaryaward*, was also included as an additional item. Responses to this question were coded into a five-point scale, ranging from 1 to 5 (1: 0, 2:

1-15, 3: 16-25, 4: 26-50, and 5: 51 and more salary awards received by the respondents). As a result, in this study, 13 indicators were employed to measure the organizational performance of drug law enforcement departments.

According to Table 21, the majority of the respondents agreed with the statements pertaining to each performance indicator. The percentages of respondents who agreed with the indicators *useofskill, reducedcost, productivity, quality, externrelations, worthserv, goalattain,* and *custsatisfact* were around 50%. Officers rated the items pertaining to efficiency and effectiveness with higher scores (average percentage, 50%). The results indicate that the majority of officers think their organizations perform well in terms of efficiency, effectiveness, service quality, and customer satisfaction. However, the percentages who agreed with the items pertaining to internal and external fairness fell below 40%. For example, about 50% of the respondents did not think that all officers were treated with respect in their departments, regardless of their status and grade. The items, *externrelations* and *productivity*, were agreed with by the most of the respondents, with percentages of 57.7% and 54.9% respectively, indicating that most of the respondents think the productivity of their departments is high and that their departments develop business relations with the outside in a timely manner.

According to the correlation table (see Appendix D), there is a significant and positive correlation between education level and two indicators (*externrelations* and *custsatisfact*) of organizational performance. The results indicate that respondents with a higher educational degree are more likely to report that their departments build relations with other organizations promptly and that citizens are satisfied with the services provided by their departments. Another individual level control variable, *rank*, is negatively correlated with *quality*, indicating that

higher-ranking officers mostly reported that their departments provided low-quality services. On the other hand, the department-level control variable, *crimerate*, is significantly related to two indicators of organizational performance, *goalattain* and *custsatisfact*. These relationships are positive, which means that departments facing higher levels of drug cases are perceived as having a higher level of goal attainment and ensuring a higher level of customer satisfaction.

5.2. Correlations

In this part, correlation matrices were created for each latent variable to explore relationships between indicators. Correlation matrices were also utilized to identify any sign of a multicollinearity problem between indicators of each latent variable. Spearman rho statistics were used to determine whether correlations between indicator variables were statistically significant or not. As explained in the methodology section, since the significance level was set at .05 for this study, any correlation coefficient scores with a p value lower than .05 were considered statistically significant. Spearman rho is the most appropriate method for correlation analyses that use ordinal data, as this study does. Multicollinearity often occurs when multiple predictor variables have a linear correlation with each other in a regression analysis and "share the same predictive information" (Mendenhall et al., 2001, p. 553). This is because they may actually be measuring the same concepts. Muticollinearity may result in inflated variances of coefficients in a model, making the inferences made by researchers unreliable. Though a number of different statistics are utilized to detect multicollinearity, such as variance inflation factor (VIF), Eigen value, and condition number, a high correlation score (around .90) between predictor variables is often considered a serious sign of multicollinerity (Kline, 2006).

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Table 22 (see Appendix D) shows the correlation scores among five control variables. The highest correlation exists between department size and crime rate (.910). This is not surprising: As explained before, department size is highly correlated with the number of drug cases reported by the departments because the departments facing more intense drug trafficking activity recruit more police officers and grow to deal with the problem. The second highest significant correlation (.440) was found between education level and hierarchical rank.

Table 23 (see Appendix D) indicates that all correlations among the five indicators of relational social capital are positive and statistically significant at the .01 level. The highest correlation is between the indicators of *integrity* and *expecttruth,* with a score of .470. *Expecttruth* is also positively correlated with *respect* (r: .456). Other correlation scores are either low or moderate, ranging from .175 to .433, which indicates no sign of multicollinearity.

The correlations between the five indicators of cognitive social capital were presented in Table 24 (see Appendix D). All the indicators are positively and significantly related to each other. The highest correlation (r: .570) was found between the indicators pertaining to having a shared language and the ability to communicate easily with others within departments. This relationship was expected, because officers who use the same vocabulary and jargon within a work environment are likely to perceive better communication with each other. Other correlation scores are moderate and fall between .447 and .534, suggesting no serious sign of multicollinearity.

According to Table 25 (see Appendix D), all correlations between the indicators of structural social capital are positive and statistically significant at the .01 level. The highest correlation (.566) exists between the indicators of *informal* and *socializing*. Respondents

reporting that they had a higher level of informal interaction with other officers in their department also reported higher level of social interaction after work. Other correlations between the indicators are moderate, and the correlation coefficient values range from .211 to 551. Since the correlation values are below the suggested level, the results do not indicate sign of a multicollinearity problem.

Table 26 (see Appendix D) shows the correlations between the indicators of the endogenous latent variable, organizational performance. The relationship between the indicator variables of *salaryaward* and *useofskill* is positive and statistically significant at the.01 level, which is the highest correlation coefficient score (.636). This result indicates that the respondents receiving higher salaries are more likely to report that their knowledge and skills are used by their departments to improve efficiency. All the other correlations between variables are either low or moderate. These correlation scores suggest no sign of multicollinearity.

Table 6: The Correlation Matrix of Performance Score and Arrest Number

		Number of Arrest (Per Officer)	Performance Score
Number of Arrest	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	10	
Performance Score	Pearson Correlation	.709[*]	1
	Sig. (2-tailed)	0.022	
	N	10	10

*. Correlation is significant at the 0.05 level (2-tailed).
Note: Arrest numbers for two departments were not available.

As discussed in the methodology chapter, although a number of organizational studies have used perceptual measures, results relying on self-reported perceptual measures have often

been doubted (Kim, 2005). To find additional support for the validity of the performance

measures used in this study, correlation analysis was conducted. The number of arrests made by

the departments and the aggregated performance scores used in the statistical analysis part of this

study were utilized to explore the relationship between perceived (subjective) performance

measures and objective performance measures (Appendix D). As explained in the methodology

chapter, arrest numbers were computed per officer. These scores were calculated by dividing the

total number of arrests made in each department in 2009 by the number of sworn officers in the

respective departments. On the other hand, the performance scores of the departments were

aggregated by using SPSS. Since performance scores were based on individual responses, they

were aggregated at the department level.

Table 6 shows the correlation between the performance score and the number of drug

arrests per officer. The relationship between the two scores is positive and statistically significant

at the.05 level, with a correlation coefficient of .71, which is quite strong. This result indicates

that drug law enforcement departments that made more drug arrests per officer received higher

perceived performance scores. The correlation result revealed that the performance measure

utilized in this study had a positive and strong association with the objective performance

measure. This is an important finding for discussions about the validity of perceptual

performance measures. On the other hand, this finding is also consistent with the results of

several empirical studies in the literature, as discussed in the literature review and methodology

chapters. This result is also discussed in detail in the final chapter.

5.3. Reliability Analysis

Reliability refers to the consistency of the measurement instrument. Cronbach's alpha is the most commonly used method for assessing the extent to which a measurement produces consistent results. For this study, Cronbach's alpha was used to assess the reliability of the multi-item measurement scales. Using the "scale" function of the SPSS software, the Cronbach's alpha scores (reliability coefficient), ranging from 0 to 1, for each latent variable were computed. A higher reliability coefficient score indicates that the reliability level of the measurement scale is higher. As discussed in the methodology section, .70 was set as the minimum reliability coefficient score for the assessment of measurement reliability in this study.

According to the reliability analysis results produced by SPSS, the measurement scale of the endogenous latent variable, organizational performance, had a good Cronbach's alpha score (.822). The measurement scale of the first exogenous variable of relational social capital had a reliability coefficient score of .693. Since this alpha score was almost at the minimum level (.70), the scale was considered satisfactory in terms of reliability. While the Cronbach's alpha score for the measurement scale of cognitive social capital was .832, the scale of structural social capital received an alpha score of .677, which was below the minimum level. These results indicate that except for the measurement scale of structural social capital, the alpha scores of other measurement scales were at or above the acceptable level. Since the Cronbach's alpha score of the structural social capital scale was close to the minimum reliability coefficient level (Morgan, 2004), the reliability score of this scale was considered acceptable.

5.4. <u>Confirmatory Factor Analysis</u>

Confirmatory factor analysis (CFA) was utilized to develop and validate each measurement model for the latent variables in the study. In confirmatory factor analysis, the measurement models were built in advance and the relationships between observed and latent variables were specified. CFA is used to "identify latent factors that account for the variation and covariation among a set of indicators" (Brown, 2006, p. 40). To determine the extent to which each specified measurement model is acceptable, goodness-of-fit statistics and parameter estimates were assessed based on results produced by AMOS version 18. In this section, first, factor loadings for all indicator variables were examined to assess whether they were statistically significant or not. After eliminating the insignificant indicators from the measurement models, goodness-of-fit statistics were examined to determine whether the model fit the data. Second, using modification indices (MI), the models were revised to improve goodness of fit. Finally, after acquiring revised models that provided acceptable model fit, interpretations pertaining to factor loadings were made.

Five measurement models for the latent variables were developed in this study. The exogenous variables are relational social capital, cognitive social capital, and structural social capital. Performance of drug law enforcement departments is the endogenous latent variable.

5.4.1. Relational Social Capital

The first exogenous latent variable is relational social capital, which is one of the three dimensions of organizational social capital. As described in the methodology section, five indicators were included in this model to measure relational social capital. Respondents were asked to indicate the extent to which they agreed with the statements pertaining to the normative

qualities of their relationships by using a five-point Likert scale ranging from *strongly disagree* to *strongly agree*. Figure 7 shows the hypothesized (generic) measurement model for the relational social capital.
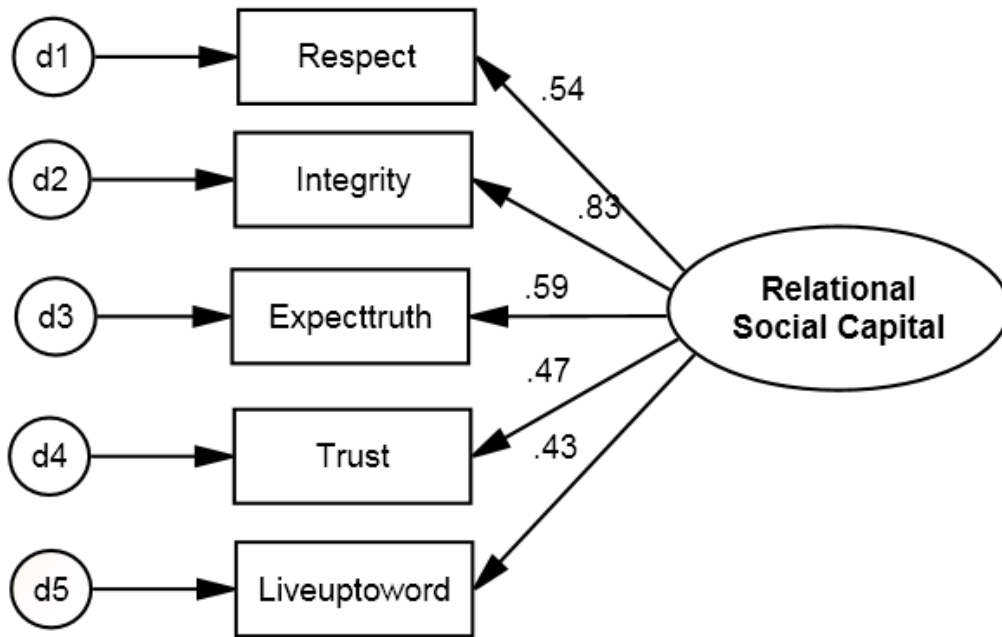
Figure 7. A Generic Measurement Model of Relational Social Capital

Identifying significant factor loadings of the indicators in the measurement model is the first step of CFA. Critical ratio (CR), which is "the statistic formed by dividing an estimate by its standard error" (Hox & Becher, 1998, p. 4), was used to assess significant and insignificant relationships. According to the significance level of .05 determined by this study, a statistically significant critical ratio should be higher than 1.96 for a positive relationship or lower than -1.96 for a negative relationship. Any indicator providing an acceptable CR value was considered statistically significant. According to the CFA results for the measurement model of relational

social capital, all the critical ratios were greater than 1.96, indicating that all relationships in this

model are statistically significant at the .05 level. As a result, all the indicators in the

hypothesized model were retained.
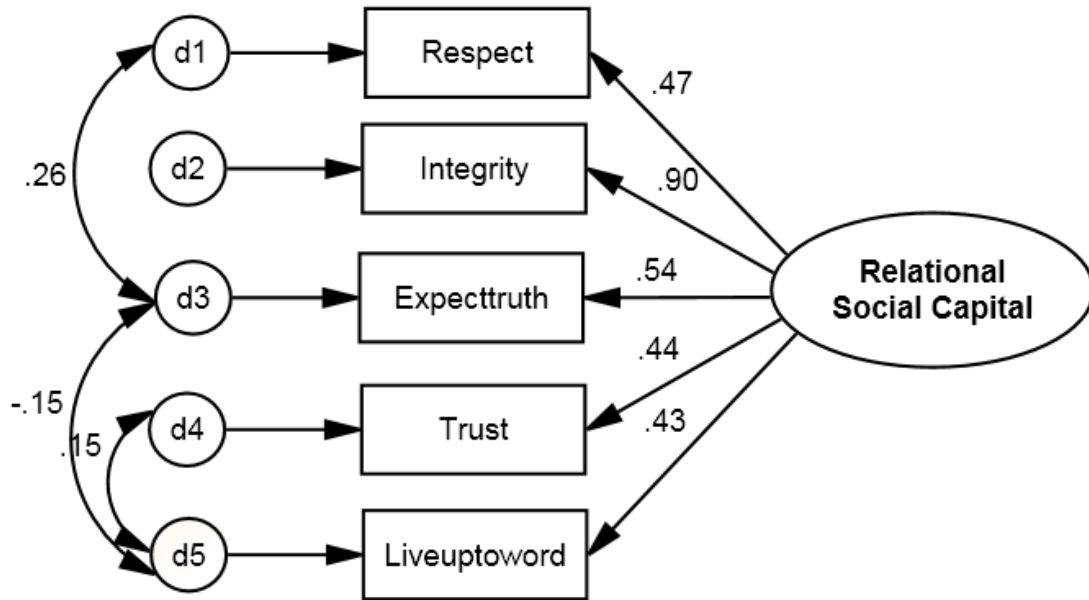
Figure 8. A Revised Measurement Model of Relational Social Capital

As discussed in the methodology section, goodness-of-fit statistics were used to assess

whether the measurement model fit the data. Although the relationships within this model were

statistically significant, the goodness-of-fit statistics (Table 7) did not indicate an acceptable

model fit, as explained in the previous chapter. To improve model fit, the error terms of the

indicator variables in the model were correlated with each other where needed by using the

modification indices (MI) produced by AMOS. The modification index "reflects an

approximation of how much the overall model chi-square would decrease if the fixed or

constrained parameter was freely estimated" (Brown, 2006 p. 119). When correlating

measurement error terms, theoretical and previous empirical evidence is taken into account. Starting with the pair of error terms that would provide the largest model fit improvement, one measurement error term was correlated at a time. This process was rerun until a good model fit was achieved. For the measurement model of relational social capital, three paths (represented by double-headed arrows) were added between the error terms of *respect* and *expecttruth*, *liveuptoword* and *expecttruth*, and *trust* and *liveuptoword* as shown in the Figure 8.

Table 7: Goodness-of-Fit Statistics of Relational Social Capital

Fit Indices	Criterion	Generic Model	Revised Model
Chi-square (x²)	Low	31.753	0.835
Probability (p or p-close)	≥ .05	0.000	0.659
Degrees of freedom (df)	≥ 0	5	2
Likelihood ratio (x²/df)	<4	6.351	0.418
Goodness of Fit Index (GFI)	>.90	0.961	0.999
Adjusted GFI (AGFI)	>.90	0.882	0.992
Tucker Lewis Index (TLI)	>.90	0.816	1.000
Comparative Fit Index (CFI)	>.90	0.908	1.000
Root Mean Square Error of Approximation (RMSEA)	≤.05	0.13	0.00
Hoelter's Critical N (CN)	> 200	111	2267

After correlating the indicator error terms, goodness-of-fit tests were used to determine whether the measurement model for relational social capital was supported as a whole by the current data. The fact that a number of goodness-of- fit indices in SEM analyses have been used in the literature was already discussed in the previous chapter. In this study, the goodness-of-fit indices most commonly used in the previous studies were reported.

Table 7 shows goodness-of-fit statistics for both generic (hypothesized) and revised measurement models. The results indicate that while the majority of the goodness-of-fit statistics

in the generic model were not at the acceptable levels, all the statistics of the revised model were within acceptable limits. Comparing the indices of both models, it was observed that goodness-of-fit statistics were significantly improved in the revised model. For example, while the probability value of the chi-square test in the generic model was .000, it increased to .659 in the revised model, indicating no significant difference between the covariance structure of hypothesized model and the observed covariance. A substantial chi-square difference (30.918) between the two models was also observed. While the adjusted goodness-of-fit index (AGFI) increased from .882 to .992 in the revised model, the root mean squared error of approximation (RMSEA) decreased from .13 to .00. The likelihood ratio (Chi-square ratio) (.418), which was the ratio of the chi-square value to the degree of freedom and goodness-of-fit index (.999), was within acceptable limits. Furthermore, a significant improvement was observed in the comparative fit index (CFI), which increased from .908 to 1.000. Other statistics used for the analysis are presented in the table.

Table 8: Parameter Estimates for Relational Social Capital

Indicator	Generic Model					Revised Model				
	U.R.W.	S.R.W.	S.E.	C.R.	P	U.R.W.	S.R.W.	S.E.	C.R.	P
Trust < --- Relational_Social Capital	0.885	0.47	0.14	6.31	***	0.962	0.444	0.165	5.82	***
Liveuptoword < --- Relational_Social Capital	0.994	0.433	0.167	5.94	***	1.127	0.426	0.199	5.652	***
Respect < --- Relational_Social Capital	1	0.543				1	0.472			
Integrity < --- Relational_Social Capital	1.622	0.826	0.206	7.875	***	2.027	0.897	0.361	5.617	***
Expecttruth < --- Relational_Social Capital	0.819	0.588	0.112	7.331	***	0.868	0.542	0.114	7.651	***
d5 <--> d4						0.109	0.153	0.049	2.24	0.025

	U. R. W.	S. R. W.	S. E.	C. R.	P
d3 <--> d1	0.099	0.258	0.03	3.272	0.001
d5 <--> d3	-0.074	-0.149	0.031	-2.395	0.017

*** . Correlation is significant at the 0.05 level.
Note: U. R.W. = Unstandardized Regression Weight; S. R. W. = Standardized Regression Weight; S. E. = Standard
Error; C. R. = Critical Ratio

According to the results displayed in Table 8, all the regression coefficients of the

indicators and correlations between error terms in the revised measurement model were

statistically significant. Factor loading values, defined as "the regression slopes for predicting the

indicators from the latent factor" (Brown, 2006, p. 53), indicate the extent to which the indicators

have loadings on the associated latent constructs (Kline, 2005). All factor loadings were higher

than .40. *Integrity* was associated with the highest factor loading (.897) among the other

indicators in the measurement model of relational social capital. As a result, the revised

measurement model produced goodness-of-fit scores within acceptable limits and indicated a

good fit to the data. No indicator variable was removed in the model. This result supported and

confirmed the revised model as the measurement model for the latent variable of relational social

capital that was used in the SEM model in the next section.

5.4.2. Cognitive Social Capital

Cognitive social capital is the second exogenous latent variable, which is another

dimension of organizational social capital. As described in the methodology section, five

indicator variables, represented by five items in the questionnaire, were included in this model to

measure cognitive social capital. These items reflect patterns of cognitive dimension such as

respondents' shared vocabulary, shared language, and shared interpretations pertaining to

organizational events, goals, and mission. Respondents were asked to indicate the extent to

which they agreed with the statement by using a five-point Likert scale ranging from *strongly*

disagree to *strongly agree*. The hypothesized (generic) measurement model for the cognitive

social capital is presented in Appendix E. Confirmatory factor analysis was utilized to validate

the measurement model.
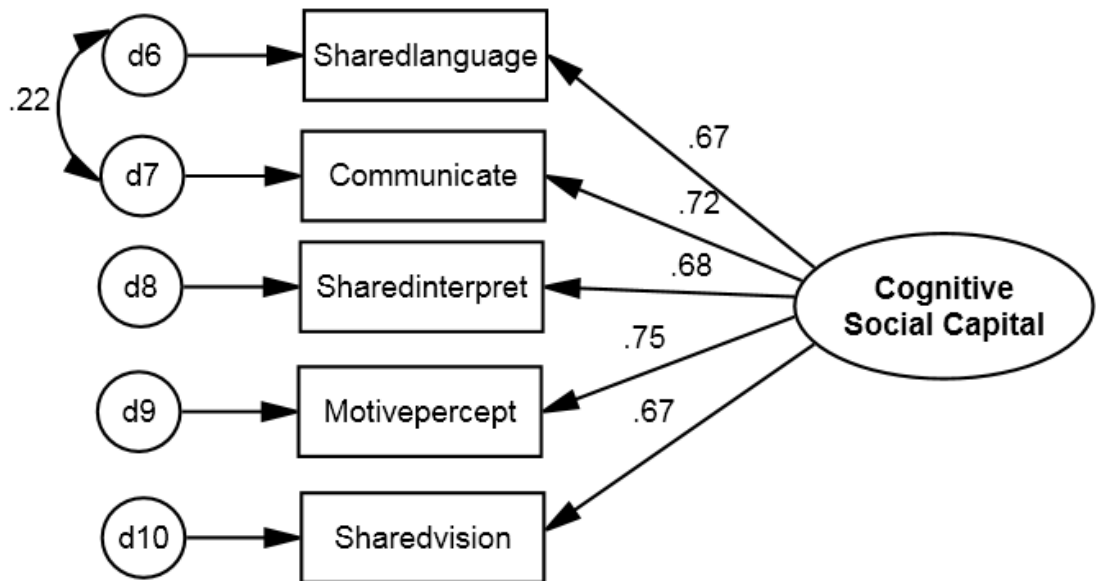
Figure 9. A Revised Measurement Model of Cognitive Social Capital

As a first step, critical ratios were assessed to identify significant and insignificant

relationships in the measurement model. According to the CFA results (Table 10), all the critical

ratios are greater than 1.96, indicating that all relationships in this model are statistically

significant at the .05 level. Therefore, no indicators in the hypothesized model were removed.

According to the goodness-of-fit statistics used in CFA, some of the goodness-of-fit

scores (Table 9) were not within acceptable limits for a good model fit, although the model

indicated a good overall model fit. To improve the model fit, the error terms of the indicator

variables in the model were allowed to correlate with each other where needed based on the

modification indices (MI) produced by AMOS and theoretical evidence. The measurement error terms of two indicators, *sharedlanguage* and *communicate*, were correlated to achieve a better fit for the measurement model of cognitive social capital. The revised model is shown in Figure 9.

Table 9: Goodness-of-Fit Statistics of Cognitive Social Capital

Fit Indices	Criterion	Generic Model	Revised Model
Chi-square (x²)	Low	10.183	0.835
Probability (p or p-close)	≥ .05	0.070	0.697
Degrees of freedom (df)	≥ 0	5	4
Likelihood ratio (x²/df)	<4	2.037	0.552
Goodness of Fit Index (GFI)	>.90	0.987	0.997
Adjusted GFI (AGFI)	>.90	0.960	0.990
Tucker Lewis Index (TLI)	>.90	0.981	1.000
Comparative Fit Index (CFI)	>.90	0.990	1.000
Root Mean Square Error of Approximation (RMSEA)	≤.05	0.057	0.000
Hoelter's Critical N (CN)	> 200	344	1357

The goodness-of-fit statistics for both the generic (hypothesized) and revised measurement models appear in Table 9. After correlating the measurement error terms of the indicators, goodness-of-fit tests were used to determine whether the revised measurement model for cognitive social capital was supported as a whole by the current data. The results indicated that all the goodness-of-fit statistics of the revised model were within acceptable limits. Comparing the indices of both models, it was observed that goodness-of-fit statistics were improved in the revised model. For example, while the score of the root mean squared error of approximation (RMSEA) in the generic model was .057, it decreased to .000, lower than the recommended level (≤.05). The probability value of the chi-square test in the revised model was

.697, indicating no significant difference between the covariance structure of hypothesized

model and the observed covariance. In the revised model, while the likelihood ratio went down

from 2.037 to .552, the AGFI score increased from .960 to .990. The GFI score also increased

from .987 to .997 and indicated a good model fit. Furthermore, an improvement was observed in

the comparative fit index (CFI), which increased from .990 to 1. Other statistics used for the

analysis fell within the recommended ranges and are presented in the table.

Table 10: Parameter Estimates for Cognitive Social Capital

	Generic Model					Revised Model				
Indicator	U.R.W.	S.R.W.	S.E.	C.R.	P	U.R.W.	S.R.W.	S.E.	C.R.	P
Motivepercept <--- Cognitive_Social Capital	1.068	0.726	0.094	11.417	***	1.186	0.75	0.116	10.232	***
Sharedlanguage <--- Cognitive_Social Capital	1	0.723				1	0.673			
Communicate <--- Cognitive_Social Capital	0.958	0.764	0.08	11.901	***	0.968	0.719	0.081	11.89	***
Sharedinterpret<--- Cognitive_Social Capital	0.942	0.663	0.089	10.529	***	1.043	0.682	0.108	9.673	***
Sharedvision<--- Cognitive_Social Capital	0.813	0.659	0.078	10.474	***	0.888	0.67	0.093	9.547	***
d7 <--> d6						0.103	0.222	0.038	2.695	0.007

*** . Correlation is significant at the 0.05 level.
Note: U. R.W. = Unstandardized Regression Weight; S. R. W. = Standardized Regression Weight; S. E. = Standard
Error; C. R. = Critical Ratio

According to the results of the revised model (Table 10), all the regression coefficients of

the indicators and correlations between error terms in the revised measurement model were

statistically significant. Strong factor loadings were observed in the revised model, ranging from

.67 to .75. One correlation (r: .22) added between the error terms of *sharedlanguage* and

communicate was statistically significant at the .05 level. The highest factor loading (.75) was

produced by the indicator of *motivepercept* in the measurement model of cognitive social capital.

As a result, the revised measurement model produced goodness-of-fit scores within acceptable

ranges and indicated a good fit to the data. No indicator variable was eliminated in the model.

This result supported and confirmed the revised model as the measurement for the latent variable

of cognitive social capital that was used in the SEM model in the next section.

5.4.3. Structural Social Capital

The final exogenous latent variable is structural social capital. It was measured by five

indicator variables, represented by five items, which were designed to reflect the structural

characteristics of relationships between officers in the departments. As explained before, this

dimension of social capital reflects the extent to which connections exist between officers and

interaction occurs between them. Respondents were asked to indicate the extent to which they

agreed with each statement by using a five-point scale ranging from *strongly disagree* to *strongly*

agree. The hypothesized (generic) measurement model for the structural social capital is

presented in Appendix E.
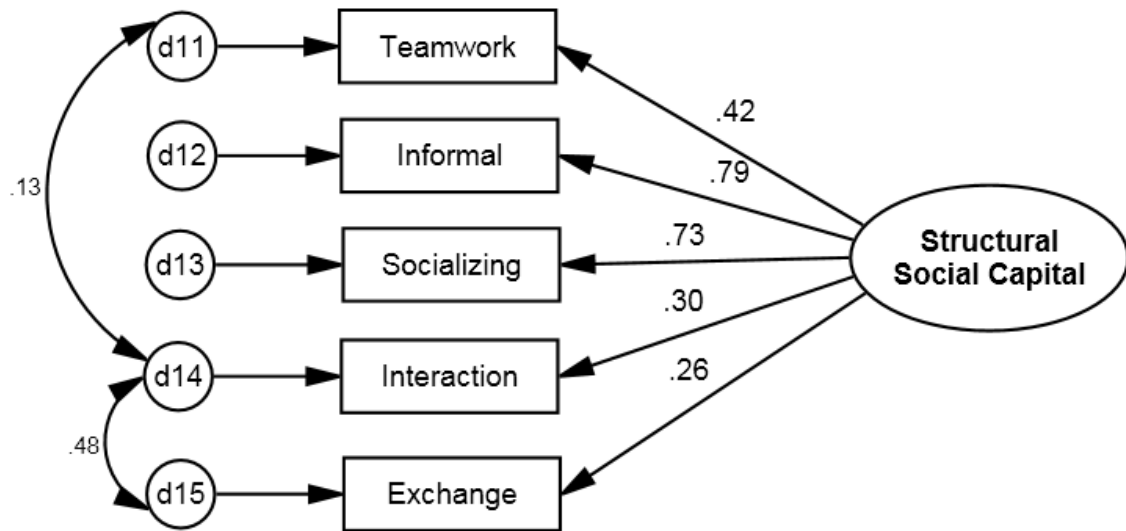
Figure 10. A Revised Measurement Model of Structural Social Capital

According to the CFA results (Table 12) for the measurement model of structural social capital, all the critical ratios are greater than 1.96, indicating that all relationships in this model are statistically significant at the .05 level. On the other hand, all the indicators were significantly associated with the latent variable and the factor loadings were higher than .30, except for *exchange,* with a factor loading of .26, which was close to the threshold level. Therefore, no indicators in the hypothesized model were removed. Although all the relationships within this model were statistically significant, the goodness-of-fit statistics (Table 11) did not indicate an acceptable model fit. According to the goodness-of-fit statistics, the majority of the goodness-of-fit values (Table 11) were not within acceptable limits for a good model fit. While the chi-square probability value was .000 (lower than .05), the likelihood ratio and RMSEA value were higher than the recommended levels, with values of 17.692 and 0.23 respectively. Except for the GFI

value, the other statistics did not indicate a good fit. Therefore, to improve the model fit, some of the error terms of the indicator variables in the model were allowed to correlate with each other where needed based on the modification indices (MI). By adding two correlation paths between *teamwork* and *interaction* and *interaction* and *exchange*, the measurement error terms of these indicators were allowed to correlate with each other to achieve a better fit for the measurement model of structural social capital. The revised model is presented in Figure 10.

Table 11: Goodness-of-Fit Statistics of Structural Social Capital

Fit Indices	Criterion	Generic Model	Revised Model
Chi-square (x^2)	Low	88.462	2.689
Probability (p or p-close)	$\geq .05$	0.000	0.442
Degrees of freedom (df)	≥ 0	5	3
Likelihood ratio (x^2/df)	<4	17.692	0.896
Goodness of Fit Index (GFI)	>.90	0.903	0.997
Adjusted GFI (AGFI)	>.90	0.709	0.983
Tucker Lewis Index (TLI)	>.90	0.443	1.000
Comparative Fit Index (CFI)	>.90	0.722	1.000
Root Mean Square Error of Approximation (RMSEA)	$\leq.05$	0.23	0.000
Hoelter's Critical N (CN)	> 200	40	919

The goodness-of-fit statistics for both the generic (hypothesized) and revised measurement models were shown in Table 11. All critical ratios in the revised model were statistically significant (p $\leq$.05). The results indicated that all the goodness-of-fit statistics of the revised model were within the acceptable limits and revealed that the revised model provided a superior fit. Comparing the indices of both models, it was observed that all goodness-of-fit statistics were significantly improved after the revision of the model. For example, the chi-square probability value increased to .442, indicating no significant difference between the covariance

structure of the hypothesized model and the observed covariance matrix. The GFI and AGFI

values also increased from .903 and .709 in the generic model to .997 and .983 in the revised

model respectively. Other statistics used for the analysis fell within the suggested limits.

Table 12: Parameter Estimates for Structural Social Capital

Indicator	Generic Model					Revised Model				
	U.R.W.	S.R.W.	S.E.	C.R.	P	U.R.W.	S.R.W.	S.E.	C.R.	P
Interaction <--- Structural_Social Capital	1.098	0.388	0.227	4.838	***	0.909	0.303	0.214	4.242	***
Informal <--- Structural_Social Capital	1.747	0.758	0.274	6.385	***	1.929	0.785	0.328	5.887	***
Socializing <--- Structural_Social Capital	1.548	0.714	0.241	6.411	***	1.693	0.733	0.28	6.052	***
Teamwork <--- Structural_Social Capital	1	0.446				1	0.418			
Exchange <--- Structural_Social Capital	0.857	0.335	0.196	4.374	***	0.706	0.259	0.199	3.543	***
d14 <--> d15						0.582	0.48	0.077	7.516	***
d11 <--> d14						0.126	0.126	0.053	2.406	0.02

*** . Correlation is significant at the 0.05 level.
Note: U. R.W. = Unstandardized Regression Weight; S. R. W. = Standardized Regression Weight; S. E. = Standard
Error; C. R. = Critical Ratio

The results of the revised model (Table 12) revealed that all the regression coefficients of

the indicators and correlations between error terms in the revised measurement model were

statistically significant. The strongest factor loading in the model was observed for the indicator

of *informal* (.79). As a result, the revised measurement model produced goodness-of-fit scores

within the suggested ranges and indicated an adequate model fit. All indicator variables were

retained in the model. The revised model was supported and confirmed by the CFA results as the

measurement model for the latent variable of structural social capital.

5.4.4. Three-Factor Model

As discussed in the literature review section, following the multidimensional model for organizational social capital (Nahapiet & Ghoshal, 1998), this study aimed to validate and test the proposed relationships in the conceptual model. Conceptualizing each dimension as a separate factor, this model highlights the theoretical relationships between three dimensions of organizational social capital and the performance of drug law enforcement departments. Based on this theoretical model, organizational social capital has multiple dimensions that are correlated with each other. Each dimension was measured as a latent construct consisting of multiple indicators. These three measurement models were separately validated, a process already discussed in the previous section. Therefore, a three-factor model social capital was deemed able to develop a valid measurement model for use in the SEM.

In the first step, the measurement models of three exogenous latent variables were included in a new model, called a three-factor model. In addition, three correlation paths were added between three latent variables based on the conceptual model (See Figure 6). As it was used in the measurement model validation of the latent variables, confirmatory factor analysis was conducted for model validation. Following the same process as CFA, it was validated as the three-factor model. The hypothesized (generic) three-factor measurement model is presented in Appendix E.
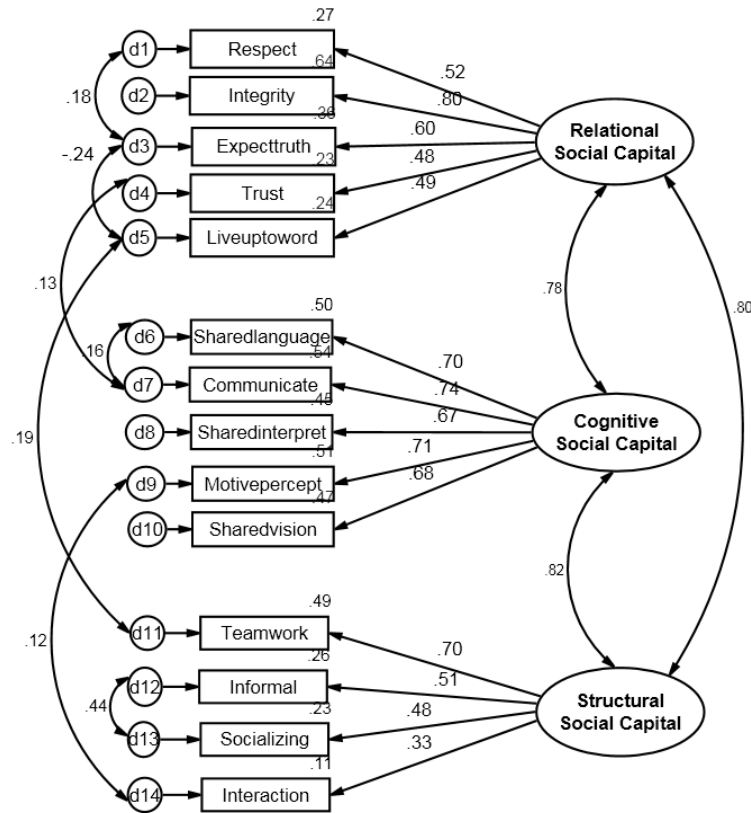
Figure 11. A Revised Three-Factor Measurement Model of Org. Social Capital

According to the CFA results (Table 14), some of the critical ratios are less than 1.96, indicating that they are not statistically significant at the .05 level. The values of two correlation paths added during the CFA for latent variables were found to be insignificant. Therefore, two correlation paths between the error terms of four indicators, *trust* and *liveuptoword* and *teamwork* and *interaction* were removed. On the other hand, all the indicators were significantly related with their respective latent variables. As explained before, a threshold for factor loadings was set at .30 for this study. One of the indicator variables, *exchange*, was eliminated from the measurement model because it produced a factor loading (.25) of less than .30. Other indicators

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were retained. All the relationships within this model were statistically significant; however, some of the goodness-of-fit scores (Table 13) were not within acceptable limits for a good model fit. For instance, while the chi-square probability value (.000) was lower than the suggested level (.05), the RMSEA value was higher than the acceptable level, with a value of .058.

To improve the model fit, the error terms of some indicator variables in the model were allowed to correlate with each other based on the modification indices (MI). By adding four correlation paths between *informal* and *socializing*, *liveuptoword* and *teamwork*, *motivepercept* and *interaction*, and *trust* and *communicate*, the measurement error terms of these indicators were correlated with each other to achieve a better fit for the three-factor model of organizational social capital. The revised model is shown in Figure 11.

Table 13: Goodness-of-Fit Statistics of Three-Factor Organizational Social Capital

Fit Indices	Criterion	Generic Model	Revised Model
Chi-square (x²)	Low	166.559	87.912
Probability (p or p-close)	≥ .05	0	0.044
Degrees of freedom (df)	≥ 0	81	67
Likelihood ratio (x²/df)	<4	2.056	1.312
Goodness of Fit Index (GFI)	>.90	0.933	.963
Adjusted GFI (AGFI)	>.90	0.901	.942
Tucker Lewis Index (TLI)	>.90	0.925	.979
Comparative Fit Index (CFI)	>.90	0.942	.985
Root Mean Square Error of Approximation (RMSEA)	≤.05	0.058	.031
Hoelter's Critical N (CN)	> 200	196	314

The goodness-of-fit statistics for both generic (hypothesized) and revised models are presented in Table 13. All critical ratios in the revised model were statistically significant (p ≤.05). In addition, the CFA results indicated that all the goodness-of-fit statistics of the revised model were within the acceptable limits and revealed that the revised model provided a good fit. The chi-square probability value significantly increased to .044, which was close to the suggested level. On the other hand, the modification resulted in a decrease in the RMSEA value to .031. All the other statistics used for the analysis fell within the suggested limits.

Table 14: Parameter Estimates for Three-Factor Model of Organizational Social Capital

Indicator	Generic Model					Revised Model				
	U.R.W.	S.R.W.	S.E.	C.R.	P	U.R.W.	S.R.W.	S.E.	C.R.	P
Trust <--- Relational_Social Capital	0.907	0.466	0.145	6.264	***	0.932	0.476	0.146	6.386	***
Liveuptoword <--- Relational_Social Capital	1.141	0.482	0.179	6.366	***	1.16	0.486	0.181	6.406	***
Respect <--- Relational_Social Capital	1	0.526				1	0.523			
Integrity <--- Relational_Social Capital	1.606	0.792	0.191	8.397	***	1.632	0.800	0.195	8.359	***
Expecttruth <--- Relational_Social Capital	0.872	0.607	0.105	8.296	***	0.872	0.604	0.106	8.24	***
Sharedvision <--- Cognitive_Social Capital	0.859	0.68	0.081	10.6	***	0.866	0.684	0.081	10.654	***
Motivepercept <--- Cognitive_Social Capital	1.068	0.709	0.097	10.987	***	1.075	0.711	0.098	11.02	***
Sharedlanguage <--- Cognitive_Social Capital	1	0.706				1	0.704			
Communicate <--- Cognitive_Social Capital	0.95	0.741	0.074	12.773	***	0.947	0.737	0.074	12.731	***
Sharedinterpret <--- Cognitive_Social Capital	0.982	0.675	0.093	10.527	***	0.983	0.673	0.094	10.507	***
Interaction <--- Structural_Social Capital	0.676	0.332	0.135	4.996	***	0.597	0.332	0.119	5.021	***
Informal <--- Structural_Social Capital	1.109	0.669	0.131	8.489	***	0.751	0.514	0.101	7.453	***
Socializing <--- Structural_Social Capital	1.002	0.643	0.121	8.302	***	0.657	0.478	0.094	6.983	***
Teamwork <--- Structural_Social Capital	1	0.619				1	0.702			

	U. R.W.	S. R. W.	S. E.	C. R.		U. R.W.	S. R. W.	S. E.	C. R.	
Exchange <--- Structural_Social Capital	0.462	0.251	0.122	3.788	***					
Relational_Social Capital <--> Cognitive_Social Capital	0.242	0.787	0.038	6.418	***	0.238	0.781	0.037	6.38	***
Cognitive_Social Capital <--> Structural_Social Capital	0.298	0.712	0.045	6.605	***	0.388	0.82	0.052	7.523	***
Relational_Social Capital <--> Structural_Social Capital	0.19	0.733	0.033	5.813	***	0.234	0.801	0.038	6.241	***
d14 <--> d15	0.584	0.484	0.078	7.521	***					
d3 <--> d1	0.062	0.177	0.024	2.628	0.009	0.063	0.179	0.024	2.668	0.008
d5 <--> d4	0.069	0.101	0.042	1.632	0.103					
d5 <--> d3	-0.104	-0.23	0.028	-3.74	***	-0.11	-0.244	0.027	-4.004	***
d11 <--> d14	0.06	0.069	0.048	1.234	0.217					
d7 <--> d6	0.067	0.157	0.033	2.028	0.043	0.069	0.161	0.033	2.12	0.034
d12 <--> d13						0.304	0.441	0.049	6.206	***
d5 <--> d11						0.12	0.193	0.043	2.799	0.005
d9 <--> d14						0.105	0.124	0.054	1.962	0.05
d4 <--> d7						0.059	0.129	0.028	2.071	0.038

*** . Correlation is significant at the 0.05 level.

Note: U. R.W. = Unstandardized Regression Weight; S. R. W. = Standardized Regression Weight; S. E. = Standard
Error; C. R. = Critical Ratio

The CFA results (Table 14) revealed that all the regression coefficients of the indicators and correlations between error terms in the revised model were statistically significant. The strongest factor loading in the model was observed for *integrity*, one of the five indicators of relational social capital (.73). All the factor loadings ranged from .33 to .80. The revised three-factor model produced goodness-of-fit scores within suggested limits and indicated an adequate model fit. In other words, the three-factor model fit the data well. As a result, the revised three-factor model was supported and confirmed by the CFA results as the measurement model for the organizational social capital.

5.4.5. Organizational Performance

Organizational performance is the endogenous latent variable in this study. Thirteen indicators were employed in the model to measure the organizational performance of drug law enforcement departments. The majority of the indicators was based on the perceptions of the police officers. The twelve items were included to reflect various aspects of the organizational performance as perceived by police officers, such as internal efficiency, internal effectiveness, internal fairness, external efficiency, external effectiveness, and external fairness. Respondents were asked to indicate the extent to which they agreed with these statements by using a five-point Likert scale ranging from *strongly disagree* to *strongly agree*. In addition, a more objective indicator, *salaryaward*, was also included as an additional item to improve the validity of the measurement model for organizational performance. Therefore, respondents were also asked to report how many salary awards they received in the last year. The hypothesized (generic) measurement model for the organizational performance is shown in Appendix E. To validate this measurement model, confirmatory factor analysis was conducted.
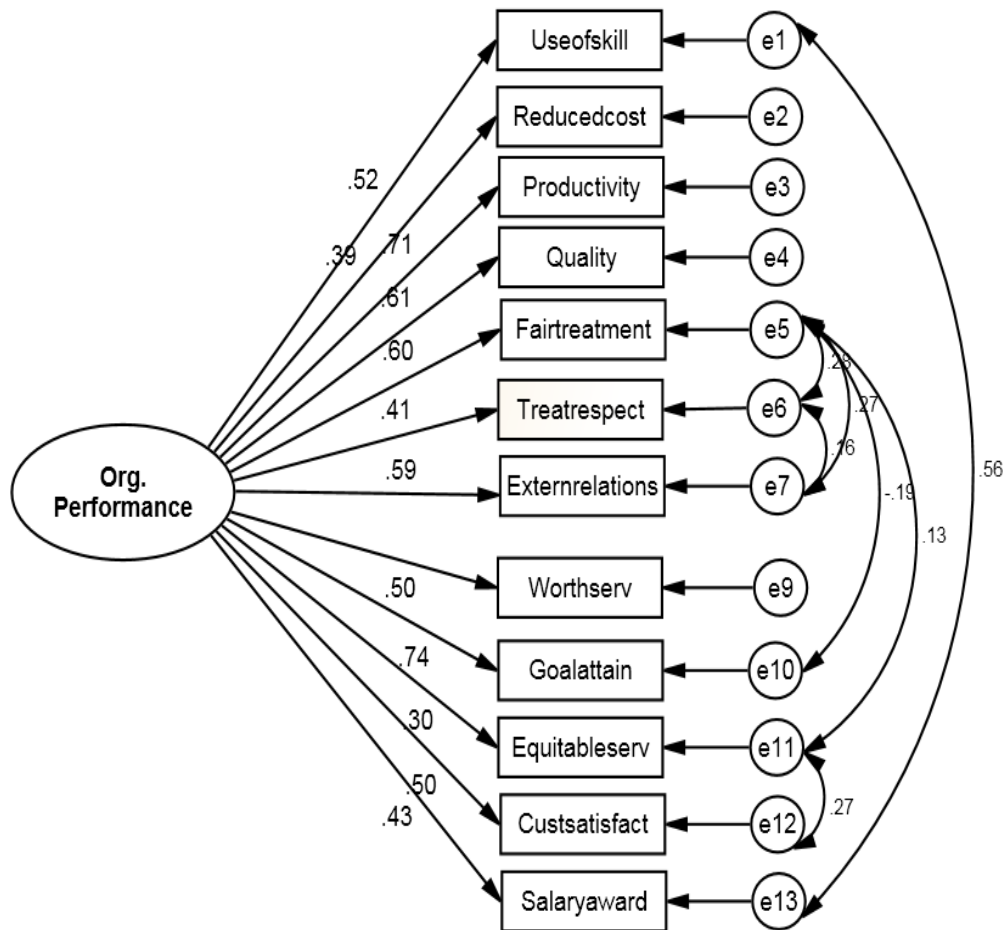
Figure 12. A Revised Measurement Model of Organizational Performance

Critical ratios were assessed to identify significant and insignificant relationships in the measurement model. According to the CFA results (Table 16), all the critical ratios were higher than 1.96, indicating that all the relationships in this model were statistically significant at the .05 level. Following the principle of parsimony, only the indicators with the highest factor loading

scores were retained in the model to simplify it. As discussed in the methodology chapter, the threshold for factor loadings was set at .30 for this study. Since the indicator variable, *mistakes*, produced a factor loading of .22, it was eliminated from the measurement model.

All the relationships in this model were statistically significant; however, the goodness-of-fit statistics (Table 15) did not indicate an adequate model fit. According to the goodness-of-fit statistics, the majority of the goodness-of-fit values (Table 15) were not within acceptable limits for a good model fit.

To improve the goodness of fit of the model, some error terms of the indicator variables were allowed to correlate with each other based on the modification indices (MI). The measurement error terms of eight indicators were allowed to correlate with each other and seven correlation paths were added between *useofskill* and *salaryaward, fairtreatment* and *treatrespect, fairtreatment* and *externrelations, fairtreatment* and *goalattain, fairtreatment* and *equitableserv, treatrespect* and *externrelations,* and *equitableserv* and *custsatisfact.* The revised model is presented in Figure 12.

Table 15: Goodness-of-Fit Statistics of Organizational Performance

Fit Indices	Criterion	Generic Model	Revised Model
Chi-square (x²)	Low	258.971	60.049
Probability (p or p-close)	≥ .05	0	0.096
Degrees of freedom (df)	≥ 0	65	47
Likelihood ratio (x²/df)	<4	3.984	1.278
Goodness of Fit Index (GFI)	>.90	0.890	0.969
Adjusted GFI (AGFI)	>.90	0.846	0.949
Tucker Lewis Index (TLI)	>.90	0.772	0.982
Comparative Fit Index (CFI)	>.90	0.810	0.987

Root Mean Square Error of Approximation (RMSEA)	≤.05	0.097	0.030
Hoelter's Critical N (CN)	> 200	104	337

Goodness-of-fit statistics for both the generic (hypothesized) and revised measurement models are shown in Table 15. All critical ratios in the revised model were statistically significant (p ≤.05). The revised model produced better goodness-of-fit scores and all the values were within the suggested limits. After the revision of the model, a significant improvement in all goodness-of-fit statistics was observed. The chi-square probability value increased from .000 to .096, indicating no significant difference between the covariance structure of hypothesized model and the observed covariance matrix. GFI, AGFI, and comparative fit index (CFI) values also increased from .890, .846, and .810 to .969, .949, and .987 in the revised model, respectively. Significant improvements were also observed for chi-square and RMSEA values. While the chi-square value decreased from 258.971 to 60.049, the RMSEA decreased from .097 to .030. Other statistics used for the analysis were also within the suggested limits.

Table 16: Parameter Estimates for Organizational Performance

Indicator	Generic Model					Revised Model				
	U.R.W.	S.R.W.	S.E.	C.R.	P	U.R.W.	S.R.W.	S.E.	C.R.	P
Useofskill <--- Org._Performance	1	0.567				1	0.52			
Reducedcost <--- Org._Performance	0.665	0.4	0.111	5.999	***	0.707	0.39	0.126	5.614	***
Productivity <--- Org._Performance	1.035	0.691	0.115	8.983	***	1.159	0.71	0.14	8.3	***
Quality <--- Org._Performance	0.924	0.585	0.115	8.055	***	1.054	0.613	0.137	7.668	***
Fairtreatment <--- Org._Performance	1.262	0.642	0.147	8.576	***	1.285	0.601	0.174	7.373	***
Treatrespect <--- Org._Performance	0.84	0.47	0.123	6.84	***	0.795	0.408	0.139	5.73	***

|	U.R.W.	S.R.W.	S.E.	C.R.		U.R.W.	S.R.W.	S.E.	C.R.	
Worthserv <--- Org._Performance	0.72	0.492	0.102	7.085	***	0.795	0.498	0.118	6.722	***
Goalattain <--- Org._Performance	0.991	0.674	0.112	8.845	***	1.181	0.737	0.141	8.378	***
Equitableserv <--- Org._Performance	0.545	0.365	0.098	5.548	***	0.496	0.304	0.109	4.538	***
Custsatisfact <--- Org._Performance	0.678	0.498	0.095	7.159	***	0.734	0.495	0.11	6.695	***
Salaryaward <--- Org._Performance	0.81	0.5	0.113	7.18	***	0.76	0.431	0.084	9.025	***
Mistakes <--- Org._Performance	0.423	0.223	0.119	3.555	***					
Externrelations <--- Org._Performance	0.996	0.634	0.117	8.508	***	1.006	0.587	0.136	7.415	***
e1 <--> e13						0.449	0.562	0.055	8.108	***
e5 <--> e6						0.262	0.282	0.062	4.243	***
e11 <--> e12						0.163	0.266	0.037	4.403	***
e5 <--> e7						0.197	0.272	0.051	3.864	***
e5 <--> e10						-0.109	-0.192	0.036	-2.995	0.003
e5 <--> e11						0.103	0.127	0.043	2.383	0.017
e6 <--> e7						0.120	0.158	.047	2.522	0.012

*** . Correlation is significant at the 0.05 level.
Note: U. R.W. = Unstandardized Regression Weight; S. R. W. = Standardized Regression Weight; S. E. = Standard
Error; C. R. = Critical Ratio

All the regression coefficients of the indicators and correlations between error terms in the revised measurement model were statistically significant (Table 16). The strongest factor loadings were observed for the indicators of *goalattain* and *productivity*, with the coefficients of .74 and .71 respectively. As a result, the revised measurement model indicated an adequate model fit. The revised model was supported and confirmed by the CFA results as the measurement model for the latent variable of organizational performance.

5.5. Structural Equation Model

This section presents the validation process of the developed structural equation model. After confirming the measurement models of the latent variables, the SEM model was developed by combining all the revised measurement models for the exogenous and endogenous latent

variables and the control variables. Only revised measurement models for the latent variables were included in the following SEM analysis. The latent variables included in the SEM were relational, cognitive, and structural social capital and organizational performance. In addition, the model also included five control variables: department size, crime rate, education level, officer tenure, and hierarchical rank. The hypothesized (generic) model is shown in Figure 13. A model validation process similar to that used in the CFA was conducted for the structural equation model.
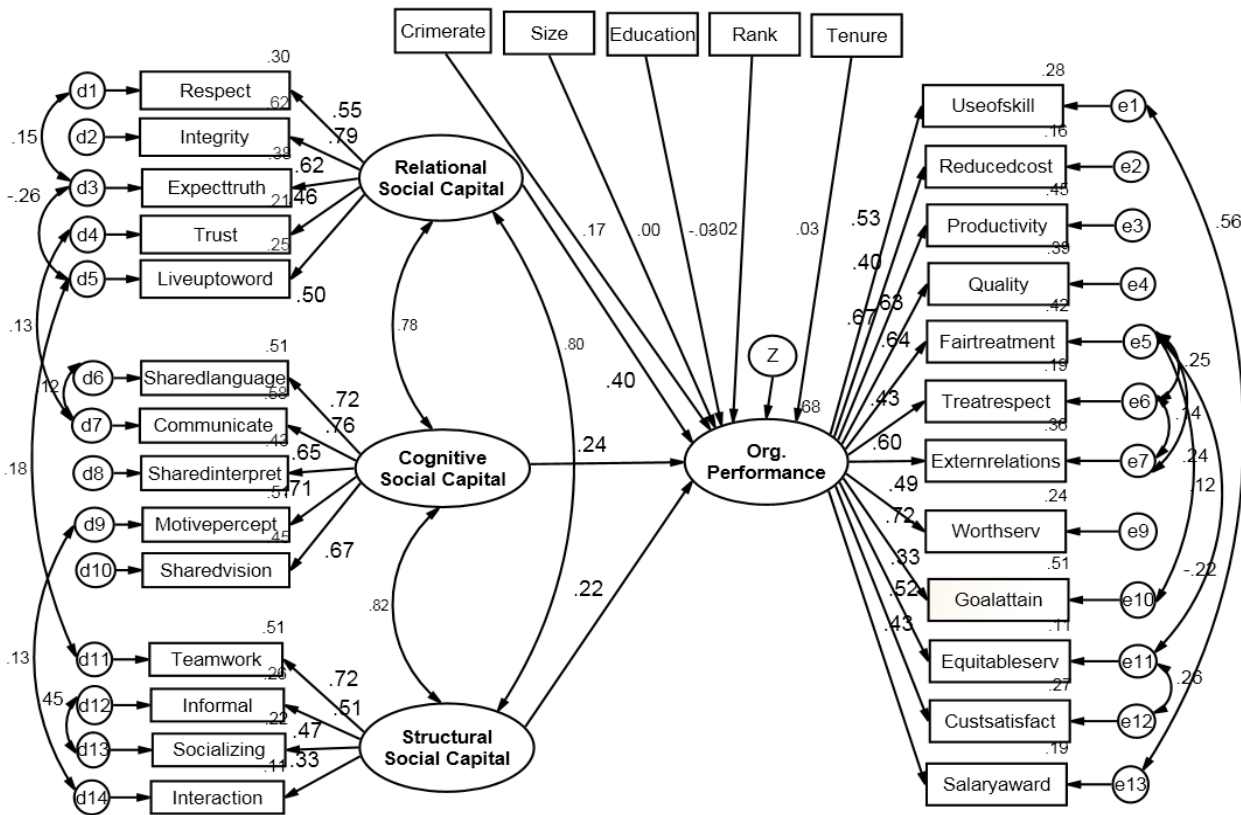
Figure 13. A Generic Structural Equation Model

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According to the goodness-of-fit statistics, the generic SEM model (Table 17) did not reveal an adequate model fit, meaning that it needed improvement. Some of the goodness-of-fit scores (Table 17) were not within acceptable limits for a good model fit. For instance, while GFI and CFI values were lower than the suggested level (.90), with values of. 834 and .753 respectively, the RMSEA was higher than the acceptable level (.05), with a value of .080. On the other hand, the model's chi-square probability value was low, with a p-value of .000.

The SEM results (Table 18) for the generic model showed that some of the critical ratios were less than 1.96, indicating that they were not statistically significant at the .05 level. Directions of all estimates were as expected and were consistent with the findings of the previous studies in the literature. However, the results indicated that four relationships between control variables and endogenous latent variable were not statistically significant at the p ≤.05 level. On the other hand, the hypothesized relationship between structural social capital and organizational performance was in the anticipated direction (positive); however, it was also found to be insignificant.
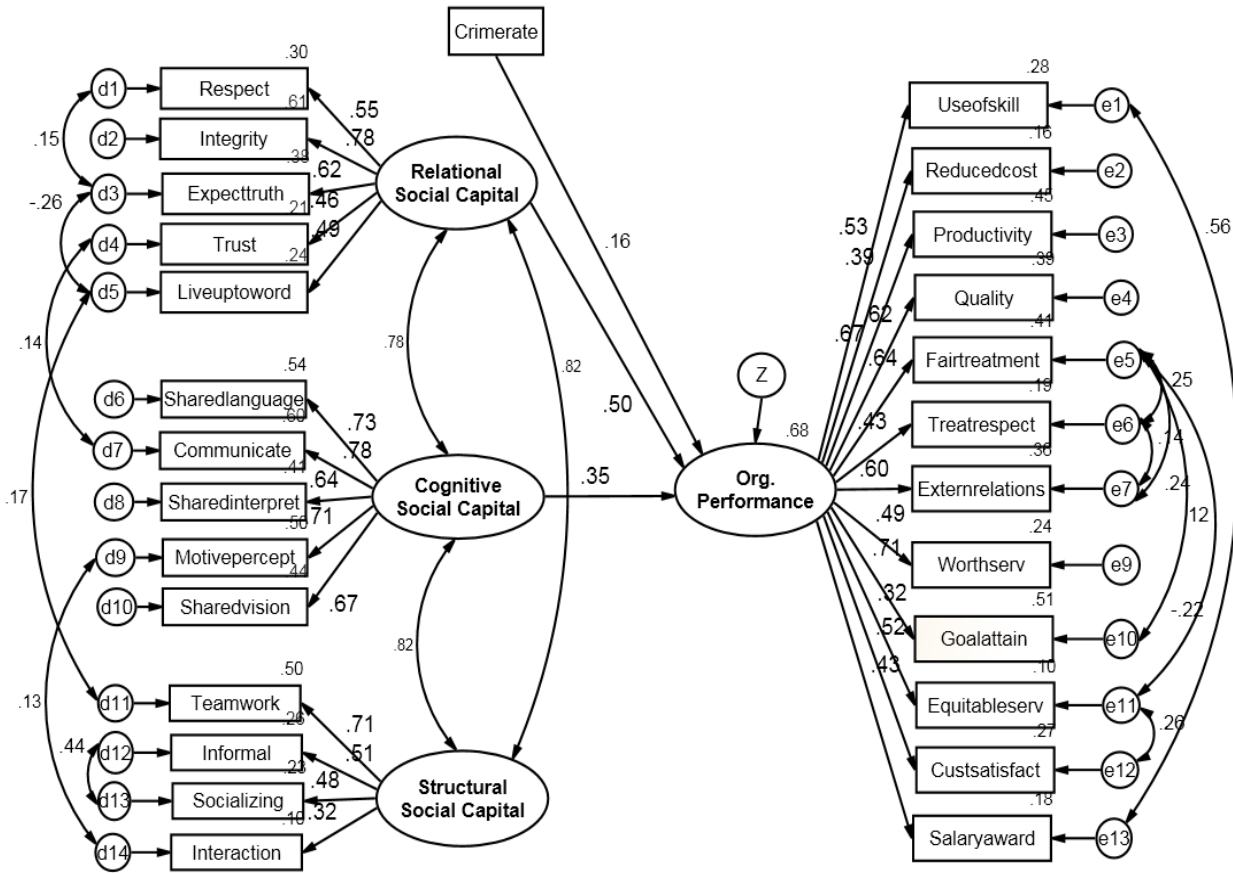
Figure 14. A Revised Structural Equation Model

In the second step, first, insignificant control variables were eliminated from the model. According to the parameter estimates scores of the generic model presented in Table 18, the hypothesized relationships of organizational performance with the control variables of department size, hierarchical rank, education level, and officer tenure were statistically insignificant. Therefore, these four control variables were omitted in the model. On the other hand, contrary to the hypothesized conceptual model, the path coefficient (the direct effect,

represented by the straight arrow in the AMOS figure) between structural social capital and the organizational performance was not statistically significant at the p ≤.05 level. Therefore, it was removed from the model. However, the latent variable of structural social capital was retained in the model because it was significantly correlated with the other two exogenous latent variables (the relational social capital and the cognitive social capital), as hypothesized.

In addition, one of the correlation paths added during the CFA was found to be insignificant. Therefore, to improve the model fit, the correlation path between the error terms of two indicators, *sharedlanguage* and *communicate*, were removed from the SEM model. The revised SEM model is shown in Figure 14.

Table 17: Goodness-of-Fit Statistics of Generic and Revised SEM

Fit Indices	Criterion	Generic Model	Revised Model
Chi-square (x^2)	Low	1253.149	493.907
Probability (p or p-close)	≥ .05	0.000	0.000
Degrees of freedom (df)	≥ 0	414	306
Likelihood ratio (x^2/df)	<4	3.027	1.614
Goodness of Fit Index (GFI)	>.90	.834	.899
Adjusted GFI (AGFI)	>.90	.801	.875
Tucker Lewis Index (TLI)	>.90	.722	.922
Comparative Fit Index (CFI)	>.90	.753	.932
Root Mean Square Error of Approximation (RMSEA)	≤.05	.080	.044
Hoelter's Critical N (CN)	> 200	117	223

The goodness-of-fit statistics for both generic (hypothesized) and revised SEM models are presented in Table 17. All critical ratios in the revised model were statistically significant (p ≤.05). The revised model produced better goodness-of-fit scores. After eliminating the insignificant variables and correlation paths from the model, significant improvements in all

goodness-of-fit statistics were observed. The model improvement can be clearly observed in Table 17. The chi-square difference between the generic and revised model was 759.242, indicating that the chi-square value significantly decreased in the revised model. On the other hand, the GFI and AGFI scores increased to acceptable levels (.899 and .875 respectively). Significant improvements were also observed for the chi-square likelihood ratio and the RMSEA value. While the likelihood ratio went down from 3.027to 1.614, the RMSEA decreased from .080 to .044, which was lower than the suggested level of .05.

The only goodness-of-fit statistic not within acceptable limits was the chi-square probability value (.000). It was found to be lower than the suggested level (.05). However, the probability value may be misleading because it is sensitive to sample size. When the sample size is large, the chi-square probability value tends to be significant even if there is a small difference between the covariance structure of the hypothesized model and the observed covariance matrix (Byrne, 2001). In addition, "it is sensitive to the size of correlations: bigger correlations generally lead to higher values of chi-square" (Kline, 2005, p. 136). Because of the reasons explained above, many researchers believe that chi-square statistics such as probability value should not be the only criteria for model fit decisions in SEM analyses. Therefore, it is recommended that along with the chi-square test, other goodness-of-fit tests such as the RMSEA and CFI also be used for a reliable assessment (Schumaker & Lomax, 2004).

Other model fit statistics used for the analysis were also within the suggested limits (CFI: .932, TLI: 922, and Hoelter's Critical N: 223). The results revealed that the revised SEM model provided an adequate model fit, meaning that the structural equation model fit the data well.

Table 18: Parameter Estimates for Generic and Revised SEM

Indicator	Generic Model					Revised Model				
	U.R.W.	S.R.W.	S.E.	C.R.	P	U.R.W.	S.R.W.	S.E.	C.R.	P
Org._Performance <--- Cognitive_Social Capital	0.194	0.243	0.106	1.821	0.069	0.273	0.353	0.082	3.333	***
Org._Performance <--- Relational_Social Capital	0.502	0.401	0.172	2.922	0.003	0.625	0.502	0.151	4.127	***
Org._Performance <--- Structural_Social Capital	0.182	0.220	0.142	1.281	0.200					
Org._Performance <--- Crimerate	0.076	0.172	0.020	3.746	***	0.070	0.159	0.020	3.477	***
Org._Performance <--- Size	-0.001	-0.002	0.017	-0.051	0.959					
Org._Performance <--- Education	-0.020	-0.026	0.033	-0.609	0.542					
Org._Performance <--- Rank	-0.019	-0.020	0.040	-0.459	0.647					
Org._Performance <--- Tenure	0.015	0.027	0.024	0.619	0.536					
Useofskill <--- Org._Performance	1.000	0.533				1.000	0.531			
Reducedcost <--- Org._Performance	0.703	0.398	0.119	5.900	***	0.701	0.395	0.120	5.848	***
Productivity <--- Org._Performance	1.070	0.672	0.126	8.489	***	1.073	0.671	0.127	8.44	***
Quality <--- Org._Performance	1.051	0.626	0.129	8.145	***	1.05	0.623	0.130	8.083	***
Fairtreatment <--- Org._Performance	1.346	0.645	0.165	8.173	***	1.347	0.643	0.166	8.116	***
Treatrespect <--- Org._Performance	0.825	0.434	0.132	6.252	***	0.825	0.432	0.133	6.210	***
Externrelations <--- Org._Performance	1.001	0.599	0.127	7.875	***	1.007	0.600	0.128	7.848	***
Worthserv <--- Org._Performance	0.759	0.488	0.110	6.893	***	0.760	0.486	0.111	6.851	***
Goalattain <--- Org._Performance	1.119	0.715	0.128	8.744	***	1.122	0.714	0.129	8.691	***
Equitableserv <--- Org._Performance	0.518	0.326	0.104	4.957	***	0.515	0.322	0.105	4.900	***
Custsatisfact <--- Org._Performance	0.756	0.523	0.104	7.242	***	0.760	0.523	0.105	7.215	***

Salaryaward <--- Org._Performance	0.740	0.430	0.08	9.267	***	0.739	0.428	0.08	9.197	***
Trust <--- Relational_Social Capital	0.864	0.462	0.133	6.504	***	0.861	0.460	0.133	6.491	***
Liveuptoword <--- Relational_Social Capital	1.130	0.496	0.167	6.779	***	1.126	0.495	0.166	6.771	***
Respect <--- Relational_Social Capital	1.000	0.547				1.000	0.547			
Integrity <--- Relational_Social Capital	1.530	0.786	0.171	8.958	***	1.524	0.782	0.170	8.965	***
Expecttruth <--- Relational_Social Capital	0.849	0.616	0.099	8.615	***	0.852	0.617	0.099	8.639	***
Sharedvision <--- Cognitive_Social Capital	0.839	0.673	0.078	10.751	***	0.810	0.666	0.073	11.138	***
Motivepercept <---	1.059	0.712	0.094	11.312	***	1.026	0.706	0.087	11.818	***
Sharedlanguage <--- Cognitive_Social Capital	1.000	0.715				1.000	0.733			
Communicate <--- Cognitive_Social Capital	0.961	0.759	0.073	13.084	***	0.958	0.775	0.074	12.947	***
Sharedinterpret <---	0.938	0.652	0.09	10.453	***	0.903	0.644	0.084	10.769	***
Interaction <--- Structural_Social Capital	0.573	0.325	0.114	5.017	***	0.574	0.323	0.115	4.967	***
Informal <--- Structural_Social Capital	0.725	0.506	0.096	7.576	***	0.737	0.510	0.097	7.579	***
Socializing <--- Structural_Social Capital	0.631	0.468	0.090	7.048	***	0.646	0.476	0.091	7.105	***
Teamwork <--- Structural_Social Capital	1.000	0.716				1.000	0.710			
Relational_Social Capital <--> Cognitive_Social Capital	0.253	0.780	0.038	6.655	***	0.257	0.776	0.038	6.722	***
Cognitive_Social Capital <--> Structural_Social Capital	0.400	0.816	0.052	7.676	***	0.408	0.818	0.052	7.778	***

Parameter	U.R.W.	S.R.W.	S.E.	C.R.	P	U.R.W.	S.R.W.	S.E.	C.R.	P
Relational_Social Capital <--> Structural_Social Capital	0.251	0.803	0.038	6.527	***	0.253	0.818	0.038	6.584	***
e1 <--> e13	0.446	0.561	0.054	8.224	***	0.447	0.562	0.054	8.233	***
e5 <--> e6	0.220	0.250	0.057	3.867	***	0.221	0.250	0.057	3.871	***
e5 <--> e7	0.167	0.242	0.047	3.585	***	0.164	0.239	0.046	3.540	***
e5 <--> e11	0.094	0.121	0.042	2.239	0.025	0.096	0.124	0.042	2.287	0.022
e11 <--> e12	0.153	0.256	0.036	4.266	***	0.154	0.257	0.036	4.285	***
d5 <--> d11	0.107	0.177	0.041	2.584	0.010	0.102	0.168	0.041	2.469	0.014
d3 <--> d1	0.051	0.147	0.023	2.218	0.027	0.050	0.146	0.023	2.213	0.027
d4 <--> d7	0.057	0.129	0.028	2.047	0.041	0.058	0.135	0.028	2.086	0.037
d12 <--> d13	0.312	0.448	0.049	6.416	***	0.307	0.444	0.049	6.312	***
e5 <--> e10	-0.124	-0.219	0.035	-3.578	***	-0.123	-0.218	0.035	-3.562	***
d5 <--> d3	-0.115	-0.259	0.027	-4.224	***	-0.115	-0.259	0.027	-4.222	***
d7 <--> d6	0.047	0.116	0.031	1.519	0.129					
d9 <--> d14	0.110	0.129	0.053	2.073	0.038	0.113	0.131	0.053	2.122	0.034
e6 <--> e7	0.101	0.136	0.045	2.213	0.027	0.100	0.135	0.045	2.197	0.028

*** . Correlation is significant at the 0.05 level.
Note: U. R.W. = Unstandardized Regression Weight; S. R. W. = Standardized Regression Weight; S. E. = Standard Error; C. R. = Critical Ratio

The SEM results (Table 18) revealed that all the regression coefficients of the indicators, latent variables, and correlation coefficients between the measurement error terms in the revised model were statistically significant. Moreover, the correlation coefficients between the three latent exogenous latent variables were also statistically significant.

As presented in the parameter estimates table (Table 18), all the factor loadings were above .30, which had been set as the factor loading threshold. The highest factor loading among the indicators of relational social capital was produced by *integrity* (.78). *Communicate* was the strongest indicator of the cognitive social capital, with a factor loading of .78. The highest factor loading was produced by *teamwork*, which was one of the four indicators of structural social capital. On the other hand, *goalattain* was the strongest indicator of organizational performance, with a factor loading of .71.

The strongest regression coefficient in the SEM model was observed for relational social capital (.50). Cognitive social capital had the second highest regression coefficient (.35). As anticipated, these regression coefficients were positive. On the other hand, the control variable, *crimerate*, had a regression coefficient of .16. A positive correlation was found between structural social capital and cognitive social capital (r: .82), and structural social capital and relational social capital (r: 82). There was also a positive correlation between relational social capital and cognitive social capital, with a correlation coefficient of .78. As a result, the SEM analysis results indicated that 68% of the variation in organizational performance was explained by the exogenous latent variables and the control variable in the model.

5.6. Hypothesis Testing

Based on the findings presented in the SEM analysis section, the five research hypotheses proposed in the study were evaluated in this section. The analysis results shown in Table 18 were utilized for the assessment. The summary of the hypothesis testing results is presented in Table 19.

H1: *Structural social capital is positively correlated with police officers' perceived organizational performance.*

This hypothesis was not supported by the results of the analysis. The standardized regression coefficient of the structural social capital was .22. This regression coefficient value was positive, which was consistent with the results of the previous empirical studies in the literature. However, the relationship between structural social capital and organizational performance was not statistically significant at $p \le .05$, meaning that the critical ratio (1.281) of this relationship was lower than 1.96. Therefore, the results indicated that the study failed to

reject the null hypothesis. In other words, based on the SEM results, the study did not provide statistical evidence to confirm that structural social capital is positively correlated with organizational performance.

H2: *Relational social capital is positively correlated with police officers' perceived organizational performance.*

The results of the analysis supported the second hypothesis. As shown in Table 18, the latent variable of relational social capital had a regression coefficient of .50. This relationship was positive and statistically significant at the .01 level. Based on this result, the null hypothesis was rejected. This relationship suggests that when the level of relational social capital goes up by one standard deviation, the organizational performance increases by .50, which is a high regression weight. As a result, this study found adequate statistical support to confirm that police officers in narcotics police departments with higher levels of relational social capital perceive higher levels of organizational performance. Therefore, it can be concluded that relational social capital has a positive association with organizational performance.

H3: *Cognitive social capital is positively correlated with police officers' perceived organizational performance.*

The results also supported the third hypothesis. The latent variable of cognitive social capital had a regression coefficient of .35. This relationship was positive and statistically significant at the .05 level. Based on this result, the study rejected the null hypothesis. This relationship suggests that a one-standard-deviation increase in cognitive social capital results in a .35 increase in organizational performance. Even though this regression weight is not as large as relational social capital's regression coefficient, it is still a relatively high regression weight. This

study found adequate statistical evidence to confirm that police officers in narcotics police departments with higher levels of cognitive social capital perceive higher levels of organizational performance. Therefore, it can be concluded that relational social capital has a positive association with organizational performance.

H4: *The three dimensions of organizational social capital are positively correlated with each other.*

Hypothesis 4 was also supported by the study results. The three exogenous latent variables—relational, cognitive, and structural social capital—were correlated with each other. All of the correlation coefficient scores were high and statistically significant at the .01 level. A positive relationship exists between relational social capital and the cognitive social capital, with a correlation coefficient of .78. A stronger positive correlation (r: .82) was found between relational social capital and structural social capital. On the other hand, structural social capital was also found to be positively associated with cognitive social capital (r: .82). These results indicated that the null hypothesis was rejected and that there were positive intercorrelations between the three dimensions of organizational social capital.

H5: *Among the three dimensions of organizational social capital, relational social capital produces the greatest effect on police officers' perceived organizational performance.*

The results also supported this hypothesis. According to the regression coefficient values shown in Table 18, among the three dimensions of organizational social capital, relational social capital had the highest statistically significant regression weight (.50). On the other hand, cognitive social capital had a regression coefficient of .35. In addition, the only control variable that had a statistically significant relationship with organizational performance was *crimerate*. Its

regression coefficient was .16, the lowest score compared with the others. The study results

indicated that the null hypothesis was rejected. As well, the study found adequate evidence to

confirm that among the three social capital dimensions, relational social capital produces the

greatest effect on organizational performance.

Table 19: Summary of Hypothesis Testing Results

	Hypotheses	**Test Result**
H1:	Structural social capital is positively correlated with police officers' perceived organizational performance.	Not Supported
H2:	Relational social capital is positively correlated with police officers' perceived organizational performance.	Supported (Positive)
H3:	Cognitive social capital is positively correlated with police officers' perceived organizational performance.	Supported (Positive)
H4:	The three dimensions of organizational social capital are positively correlated with each other.	Supported (Positive)
H5:	Among the three dimensions of organizational social capital, relational social capital produces the greatest effect on police officers' perceived organizational performance.	Supported (Positive)

6. DISCUSSION, IMPLICATIONS, AND LIMITATIONS

The study findings provided strong support for the majority of the research hypotheses. The results indicated that two exogenous latent variables have a statistically significant relationship with organizational performance. In this section, the findings pertaining to the research hypotheses are discussed in detail. Based on these findings, along with the contributions of the study, the organizational and theoretical implications are discussed. Finally, research questions emerging from the study findings that could guide future research are discussed. The limitations of the study are also presented.

6.1. Discussion of the Findings

6.1.1. Relational Social Capital

Research question one asked whether a relationship between relational social capital and organizational performance exists. It was hypothesized that relational social capital is positively related with organizational performance. The results of the SEM analysis confirmed this hypothesis and suggested is the presence of a positive and statistically significant relationship with a regression coefficient of .50. This finding indicates that police officers in narcotics police departments with higher levels of relational social capital perceive higher levels of organizational performance.

The CFA analysis results indicate that the relational dimension of social capital, referring to the normative quality and normative characteristics of relationships between police officers in departments, was measured by five indicators in the model, having factor loadings higher than

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.46. In the literature, trust is considered the most important norm related with social capital and is widely used as a proxy for social capital's relational aspect. Adler and Kwon (2000) suggested that trust is a necessary component for social capital to produce the desired outcomes. All the indicators of this construct related to intraorganizational trust. *Integrity*, which assessed organization-wide perception of the integrity of officers, produced the highest factor loading (.78) among all the indicator variables of this construct. Other indicators, including *trust*, showed moderate factor loadings (ranging from .46 to .62). No indicator variable was found to be insignificant and removed in the model. Therefore, it can be concluded that the measurement model for relational social capital as conceptualized in the literature was confirmed and validated.

The results of the correlation analysis indicate that crime rate and tenure are significantly correlated with level of trust. A statistically significant and negative correlation (r: -.128) exists between crime rate (measured as the number of drug cases) and level of interpersonal trust as perceived by officers. Police officers from departments with a greater number of drug cases perceive lower levels of interpersonal trust. A possible explanation for this result is that officers working in departments coping with heavier workloads may not have the opportunity to interact socially with each other and thereby develop trusting relationships. In addition, most departments with higher crime rates are larger departments in which officers have limited opportunities to interact with each other and thereby develop department-wide trust. Therefore, they may perceive a lower level of trust in their departments. The perceived level of trust also varies by officer tenure. A positive and significant relationship between trust and officer tenure indicates that officers with more years of service perceive higher levels of trust. Since the development of

interpersonal trust depends primarily on repeated interactions and long-lasting relationships among individuals, officers who work for a longer time in the same department can develop more trusting relationships with other officers.

Relational social capital as a latent construct was shown to have a strong relationship with organizational performance. The result is consistent with previous studies in the literature. As mentioned in the literature review section, components of relational social capital such as trust and reciprocity may influence organizational performance in various ways. Since measurement of this social capital dimension relies to a large extent on indicators relating to interpersonal trust, it is important to focus on the effect of trust when discussing the relationship between relational social capital and performance. In addition, reciprocity norms develop work environments in which trusting relationships exist among workers because individuals who trust others are more likely to expect that others will reciprocate their efforts (Watson & Papamarcos, 2002).

The results of this study support the existence of a hypothesized link between trust and collective action, which is an important factor in organizational performance. Trust may facilitate social exchange and helps actors solve coordination and cooperation problems, which is often the case in drug law enforcement departments in Turkey. In other words, officers working in departments with higher levels of trust are more likely to engage in collective actions and cooperation because individuals who trust one another are more likely to help each other and cooperate (Bolino et al., 2002; Cardona et al., 2004). Along with trust, other normative qualities of social relations such as reciprocity and obligation also encourage officers to engage in collective actions that increase performance (Moran, 2005).

As mentioned in previous sections, the influence of individual-level factors such as officer motivation, job satisfaction, and commitment to organizational performance has been already empirically proven (Kim, 2005). Empirical studies have also confirmed the positive correlation between some normative qualities of social relationships and the factors mentioned above (Flop & Volker, 2001; Nahapiet & Ghoshal, 1998). These linkages may help to explain the study results regarding the relationship between relational social capital and organizational performance. For example, the approval of other officers, recognition, and a positive work environment are important elements of motivation and job satisfaction. These elements often emerge from officers' social relationships when they possess higher levels of normative qualities such as trust and reciprocity. The importance of these qualities when it comes to motivation has already been explained by referring to Herzberg's (1966) motivation approach in the literature review section. Thus, by increasing police officers' motivation and job satisfaction, relational social capital may improve the performance of drug law enforcement departments. Relational social capital may also impact organizational performance through organizational commitment. For example, if the officers believe that their efforts will be reciprocated by their peers, they may be highly committed to the department. Organizational commitment may play an essential role in the performance of a drug law enforcement department because police officers are sometimes expected to make an extra effort to get jobs done. A positive departmental emotional attachment created by relational social capital plays an important role in improving department performance.

Relational social capital may also influence improvements in quality of service—an important element of organizational performance as represented by one item in the measurement model of the study. As suggested by Tsai and Ghoshal (1998), relational social capital may

facilitate the development of common understanding among officers and produce a higher-quality outcome. In addition, as mentioned in the literature review section, by strengthening the emotional links between individuals and groups, relational social capital may provide social support through which officers can cope with emotional problems such as stress and burnout, which often plague law enforcement departments. This support may also encourage information exchange, which is essential to drug law enforcement departments. For example, department-wide interpersonal trust keeps communication and information dissemination channels open, which increases information sharing. If two individuals trust each other, they are more likely to engage in resource and information exchange because they will trust that their conversation partner will not exploit this relationship for his or her benefit. Furthermore, along with formal channels, relational social capital may also enhance the utilization of informal channels, such as social relationships, that offer more efficient means for disseminating information. The use of such informal information channels provides departments with important performance advantages (Leana & Van Buren, 1999; Nahapiet & Ghoshal, 1998).

The fifth hypothesis postulated that, of the three dimensions of organizational social capital, relational social capital produces the greatest effect on police officers' perceived organizational performance. The results of the SEM analysis confirmed this hypothesis. Relational social capital has a stronger relationship with organizational performance than does cognitive social capital, with regression coefficients of .50 and .35 respectively. This finding indicates that each dimension is differently correlated with organizational performance. Since very few empirical studies have investigated the relative importance of the three dimensions in terms of organizational outcomes, it is difficult to find opposing or supporting evidence from the

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literature and make comparisons. Tsai and Ghoshal (1998) found that trust within an

organization is more influential than cognitive social capital in terms of resource exchange and

innovation. In addition, O'Shea (2003) found that relational social capital has a greater influence

on organizational commitment than the other two dimensions, which is consistent with the

findings of the current study. A possible explanation for this result is that trust and other

normative qualities of social relations mean much more to police officers when it comes to

performing well in drug law enforcement departments. For example, the existence of a high level

of confidence among officers is perceived as one of the most important requirements for a

successful police job. All police officers want to trust their teammates during drug operations

because they frequently conduct high-risk operations and face dangerous criminals. Trust is also

considered to be important for effective supervisor-subordinate relationships, particularly in

quasi-military organizations (Stull, 2009) such as police departments in Turkey. The study result

indicating that relational social capital has the strongest association with performance is therefore

not surprising, particularly for law enforcement departments.

6.1.2. Intercorrelation between the Social Capital Dimensions

The fourth hypothesis proposed that there is a positive correlation between the three

dimensions of organizational social capital. The results of the SEM analysis support this

hypothesis and suggest that there is a positive and statistically significant correlation between

relational, cognitive, and structural social capital. This result is also consistent with the

literature. A strong positive correlation was found between structural and relational social

capital. This result suggests that a positive relationship exists between trust and social

interaction, a finding which is supported by the literature. However, it is not possible to identify

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the direction of the relationship. The SEM results show that police officers from departments in which trusting and reciprocal relationships exist are more likely to exhibit cooperative interactions and informal relationships. As mentioned in the literature review section, individuals can develop repeated interaction patterns and long-lasting social relationships where a sense of reciprocity exists. On the other hand, when social interactions between individuals (a component of structural social capital) increase, the level of interpersonal trust and reciprocity norms among them also goes up. However, this correlation does not indicate a causal relationship between structural and relational social capital. Though the majority of existing findings in the literature articulate the trajectory as moving from structural to relational social capital, it is difficult to suggest that one dimension increases the other based on the current study results.

The study findings indicate that a positive correlation also exists between relational and cognitive social capital. The available evidence in the literature supports this result even though only a small number of studies examine the relationship between these two constructs. Shared vision and shared interpretation, two major elements of cognitive social capital, may facilitate the development of trusting relationships between officers. As Tsai and Ghoshal (1998) noted, when a member of an organization shares an organization's collective goals and vision with other members and with the organization as a whole, others are likely to perceive him or her as trustworthy. Similarly, police officers who use same vocabulary and jargon are likely to be perceived by other officers as trustworthy. In addition, officers who share collective goals with the department may be perceived by other officers as trustworthy because other officers can be confident that they all work for the same goals and nobody will use these relationships for individual gain. The SEM results show that the extent to which police officers share the same

language, interpretations, and collective goals with others in the department is positively associated with their level of perceived trustworthiness. However, it is difficult to draw a causal relationship between relational and cognitive social capital from this finding.

A positive and statistically significant correlation was found between structural and relational social capital. As interactions between officers in a department increase, the level of interpersonal trust among them, which is the primary manifestation of relational social capital, also goes up. Previous studies have also provided strong support for this relationship (Gulati, 1995; Granovetter, 1985; Tsai & Ghoshal, 1998). Social interactions among police officers may stimulate trusting relationships because frequent interactions may help them get to know each other, exchange information, and develop a common perspective. In addition, as officers interact over time, they are likely to perceive each other as trustworthy. On the other hand, relational social capital has been considered an important factor that encourages individuals to become involved in social exchanges with others (Moran, 2005; Nahapiet & Ghoshat, 1998). As mentioned earlier in this section, the majority of available empirical studies in the literature point out the direction of this relationship as moving from structural social capital to relational social capital and suggest that trusting relationships are built and maintained by social interactions.

6.1.3. Cognitive Social Capital

A positive relationship between cognitive social capital and organizational performance was hypothesized. The results of the SEM analysis support this hypothesis and suggest that a positive and statistically significant relationship exists, with a regression coefficient of .35. This result indicates that police officers in narcotics police departments with higher levels of cognitive social capital perceive higher levels of organizational performance.

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The cognitive social capital represented by work-related shared vocabulary or language, shared interpretation, and shared vision about organizational goals was measured by five indicator variables in the measurement model. According to the CFA results, all the factor loadings range from .64 to .78, values which are quite high. The indicator, *communicate* (Item #19), which reflects the extent to which officers can easily communicate with others in the department, produced the highest factor loading score (.78). All other indicators also provided high factor loadings; they were retained in the revised measurement model. It can therefore be concluded that the measurement model of cognitive social capital was confirmed and produced satisfactory results in terms of validity.

The study results demonstrate that cognitive social capital has a positive relationship with organizational performance, which is consistent with the findings of previous studies. As explained in the literature review section, it is suggested that individuals who use shared codes and vocabulary in the workplace are more likely to have similar understandings and interpretations of organizational concepts. Such shared understandings may improve organizational performance by enhancing knowledge transfer, promoting organizational learning, and developing norms (Cohen & Prusak, 2001). Likewise, cognitive social capital may have important functions for the performance of drug law enforcement departments. Police officers who use shared language and vocabulary and who have a shared vision can avoid misunderstandings and misinterpretations. This may also create a work environment that engenders effective communication and information sharing, which is essential for high-performing drug law enforcement departments.

As explained earlier, Nahapiet and Ghoshal (1998) asserted that social capital facilitates the creation and dissemination of collective knowledge within organizations. It has been suggested that collective knowledge lasts longer and is more beneficial than individual knowledge. Every individual contributes to the collective knowledge within organizations. Collective knowledge may therefore have important implications, particularly for narcotics departments, in terms of performance. It is widely believed that when experienced officers leave a department, the crucial knowledge they possess pertaining to the work and practices goes with them, which may negatively affect the department's performance. On the other hand, a work environment that encourages collective knowledge makes it more likely that the knowledge provided by these officers will remain in the department even if they leave.

Cognitive social capital is also important in order for officers to develop shared perceptions about collective goals and what the department should accomplish. As suggested in the literature, shared understanding and vision among workers may reduce conflict among them and encourage them to focus more on the organizational goal rather than on individual interests (Adler & Kwon, 2002; Subramaniam & Youndt, 2005). Inappropriately designed individual-level incentives sometimes cause police officers to ignore organizational goals and objectives because these incentives encourage them to pursue individual interests, which may result in a lack of information sharing and cooperation. For example, a police officer or a team might conceal or fail to share important information leading to the arrest of a drug dealer in order to receive a possible reward offered by the department; however, arresting a drug dealer alone without sharing such information often results in failure to dismantle the larger drug trafficking organization behind the dealer. Furthermore, there is always a risk that officers or teams will

unknowingly pursue same investigative targets, which might negatively affect organizational performance. The relationship between cognitive social capital and organizational performance is particularly important for drug law enforcement departments. Mutual understandings, collective goal orientation, and harmony among officers may have significant functions in these departments because even a small mistake made by an individual can cause a whole operation to fail or put others' lives at risk. The results of this study suggesting that a positive association exists between cognitive social capital and the performance of drug law enforcement departments are not surprising.

The SEM results indicate that there is a positive correlation between cognitive and structural social capital, which is consistent with the literature. In other words, as interactions among officers increase, they become more likely to develop a shared vocabulary, similar interpretations, and a shared vision. The literature suggests that frequent social interactions, the primary element of structural social capital, facilitate the development of cognitive social capital. As well, previous studies highlighted the importance of social interactions for workers in acquiring and internalizing organizational values, goals, and vision. Similarly, in drug law enforcement departments, social interactions may exert significant influence in helping police officers not only adopt language, jargon, and work practices but also grasp organizational vision and values.

6.1.4. Structural Social Capital

A positive relationship between structural social capital and organizational performance was postulated in the study. The extent to which officers interact with each other and have informal relationships within departments was used to measure the structural social capital

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construct. The results of the SEM analysis do not support this hypothesis and suggest that there is no statistically significant relationship between structural social capital and performance.

The structural social capital represented by the interaction among officers, including both formal and informal relationships, was measured by five indicators in the measurement model. The CFA results indicated that all the factor loadings were statistically significant; however, one of the indicator variables, *exchange*, was eliminated from the measurement model in the three-factor model because it produced a low factor loading (.25). The other four indicators (with factor loadings ranging from .32 to .71) were retained. Compared to other exogenous latent variables, the factor loadings of structural social capital indicators were low, indicating that a better measurement model could be developed.

The results of the correlation analysis indicate that department size and crime rate are significantly correlated with two indicators (*informal* and *socializing*) of structural social capital. A negative and statistically significant correlation exists between department size and the *informal* indicator. This result indicates that police officers in larger departments have less opportunity to talk informally with their peers in the workplace. Likewise, a negative relationship exists between size and *socializing*, which indicates that officers from larger departments are less likely to interact with each other after work. Similar relationships exist between crime rate (measured as the number of drug cases) and these structural social capital indicators. A possible explanation for this result is that officers in the larger departments may have fewer opportunities to talk informally at work and interact socially with each other after work. Likewise, officers in departments with higher crime rates may be busy and therefore have only limited opportunities for interaction with others in the department. As explained in the

findings chapter, since department size is highly correlated with crime rate, similar relationships exist with these two indicators. Not surprisingly, the departments in jurisdictions with more intense drug trafficking contain more police officers.

The study results show that structural social capital has neither a significant nor a direct relationship with organizational performance. That is, the frequency of social interactions among police officers does not necessarily affect the performance of drug law enforcement departments directly. This finding contradicts some of the previous studies on organizational social capital. As explained in the literature review section, these studies suggest that higher levels of structural social capital can improve various components of organizational performance such as the task performance of workers, quality of services, and innovation (Moran, 2005; Morrison, 2002; Thompson, 2005). The current study could not produce adequate results to support this relationship. On the other hand, the study found the relationship to be positive (.22), which is consistent with previous empirical studies.

This contradictory result may be attributable to the unique characteristics of law enforcement departments in Turkey. Previous studies testing this organizational social capital model have been conducted primarily in either private or less hierarchical organizations. As mentioned before, drug law enforcement departments are strictly hierarchical organizations. Frequent informal interactions are sometimes perceived by supervisors as obstacles to high-quality performance. When the limits and rules of social relations, particularly between officers and supervisors in the workplace, are not appropriately specified and understood, these relations may be exploited by the officers.

Another possible explanation for this different result may be due to the cultural differences between Turkey and Western countries. The theoretical model of organizational social capital designed by Nahapiet and Ghoshal (1998) was examined and tested primarily in Western countries. It is not surprising that this model produced different results in Turkey, because individuals in different cultures can behave and perceive things differently. For example, in Turkey, there is a large gap between ranking officers and police officers in terms of power, which is considered a kind of discrimination. Ranking officers are perceived as the owners and sole decision makers of the departments. This observation is also supported by Hofstede's (2001) Power Distance Index. This index "measures the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally." According to this index, compared to Western countries such as Germany, the United Kingdom, and the United States, where the power distance is low (between 34 and 40), Turkey has a large gap with a score of 66. Because of this large power distance between the different levels of officers, social interactions may not produce the expected outputs and may not have a direct influence on departments' performance.

On the other hand, as explained before in this section, structural social capital has a strong relationship with both relational and cognitive social capital. Its lack of a direct relationship with organizational performance and strong correlations with the two other social capital dimensions indicate that structural social capital may influence organizational performance only indirectly through its influence on these two social capital dimensions. Put differently, relational and cognitive social capital may function as mediating factors between structural social capital and organizational performance. This may offer another explanation for

the different results regarding this hypothesis. Social interactions between officers can be associated with departments' performance only when these relations create interpersonal trust, shared vision, shared interpretation, and shared understandings. Similar results were found by some other studies in the literature (Giantivo, 2007; Tsai & Ghoshal, 1998). However, it is important to be cautious when interpreting this finding because the measurement of structural social capital may have possible deficiencies, which were discussed in the limitations section.

6.1.5. Organizational Performance

Organizational performance, the endogenous latent variable in this study, was measured by 13 indicators. The 12 items pertaining to the perceptions of police officers in the narcotics departments reflected various aspects of organizational performance, including internal efficiency, internal effectiveness, internal fairness, external efficiency, external effectiveness, and external fairness. In addition, a more objective indicator, *salaryaward*, which asked how many salary awards officers received in the last year, was included to create a more valid measurement model.

One of the 13 indicators, *mistakes*, was removed from the model because of the low factor loading (.22). Other indicators produced significant and moderate factor loadings ranging from .32 to .71. The strongest factor loadings were provided by the indicators of *goalattain* and *productivity* (with high factor loadings of .71 and .67 respectively). As explained in the methodology section, *salaryaward*, a kind of external performance evaluation, was used as another indicator of organizational performance. It produced a statistically significant and moderate factor loading (.43). This result indicates that it is consistent with the other indicators

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in the model. As a result, the CFA results indicated a good model fit and confirmed the measurement model for the organizational performance of drug law enforcement departments.

According to the correlation analysis results, the organizational performance scores of the departments were correlated with the number of drug arrests per officer (r: .71). This strong relationship is statistically significant and positive: Drug law enforcement departments with a greater number of drug arrests per officer had higher perceived performance scores. The computation of these scores has already described in the previous sections. This result is important because the validity of perceptual performance measures has often been questioned, even though self-reported perceptual measures are widely used by a number of organizational studies (Brewer & Selden, 2000; Chun & Rainey, 2005; Kim, 2005). Opposing arguments most often emphasize the possible response biases that might affect study results (Huselid, 1995; Parhizgari & Gilbert, 2004). Perceptual performance measures are often criticized on the basis that performance evaluations relying on workers within an organization do not accurately reflect the actual performance of the organization, thereby negatively affecting the validity of the study results. However, even though this study measured organizational performance by relying mostly on officers' perceptions, the performance measurement model had two strengths. First, the measurement model of the organizational performance construct included a relatively objective and external performance evaluation indicator (*salaryaward*) that was confirmed by the CFA results. Second, the validity of the performance measurement model was also supported by the correlation analysis results. A positive and strong association between the aggregated performance score and the number of drug arrests per officer indicates that the performance

measure used in this study correlates with the objective measure. This result is consistent with the results of several other organizational studies (Walker & Boyne, 2006).

6.1.6. Discussion of Control Variables

One of the five control variables in the study, *crimerate*, was found to be significantly associated with organizational performance, with a regression coefficient of .16. As explained in the methodology section, crime rate was measured by the number of drug cases reported in each city department in 2009 to the control intensity of jurisdictions in terms of drug activities. The positive relationship between crime rate and performance indicates that departments facing higher levels of drug cases are perceived to have a higher level of organizational performance. A possible explanation for this result may be that officers working in departments dealing with more drug trafficking activity may be more likely to report higher scores pertaining to performance items such as *productivity*, *useofskill*, *externrelations*, *worthserv*, *custsatisfact*, and *salaryaward*. High levels of drug trafficking activity often result in more drug operations. Since the performance measure is based on officer perception, officers in departments conducting more operations may believe more frequently that they do a good job and provide a satisfactory public service.

No significant relationship was found between department size and organizational performance. Since department size is highly correlated with crime rate, a possible multicollinearity may be responsible for the insignificant relationship between size and performance. However, this finding is consistent with the correlation analysis. The results of the correlation analysis also indicate no significant relationship between department size and the indicator variables of organizational performance. This result is not surprising because the

previous findings regarding organization size in the literature are mixed. While some organizational studies found that the size of an organization has a positive effect on its performance, others found a negative or nonexistent relationship (Moreland & Levine, 1992; Tsai & Ghoshal, 1998).

Education level is not significantly related to organizational performance. This result may be due to the small variation between the education levels of the respondents. The majority of the respondents had either a two-year college degree (119) or a bachelor's degree (156), with a combined percentage of 90%. On the other hand, a significant and positive correlation was found between education level and only two indicators (*externrelations* and *custsatisfact*) of organizational performance. Other indicators had no significant correlation with education level.

Hierarchical rank was not found to be significantly related to organizational performance. The literature suggests a positive correlation between officer rank and perceived organizational performance (Chun & Rainey, 2005; Kim, 2005). As with education level, the small variation among respondents' ranks may be responsible for this insignificant relationship. The majority of the respondents were police officers, with a percentage of 83%.

Finally, the study results showed that no significant relationship exists between officer tenure and organizational performance. The correlation analysis supports this result; no significant bivariate correlation was found between officers' years of service and indicators of organizational performance.

6.2. Implications

The overall study results indicated that organizational social capital has a positive and significant association with the organizational performance of drug law enforcement departments. While two dimensions, relational and cognitive social capital, have direct relationships, structural social capital does not, although it may have an indirect impact on performance. Confirming the theoretical relationship between social capital and performance proposed in the literature (Adler & Kwon, 2002; Lazega & Pattison, 2001; Leana & Van Buren, 1999; Lin, 2001; Lin & Wan, 2009; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998; Walker, Kogut, & Shan, 1997), this study supports the argument that social capital may significantly contribute to organizational effectiveness. Based on these results, several important implications can be drawn. In this section, some theoretical, methodological, and policy implications are presented and discussed.

6.2.1. Theoretical Implications

This study has some theoretical implications. Based on the theoretical model created by Nahapiet and Ghoshal (1998), it was hypothesized that structural social capital is directly correlated with performance. However, the current study could not provide adequate results to support this relationship. The study results indicate that structural social capital is not directly related to organizational performance. In other words, social interactions among police officers do not necessarily affect the performance of drug law enforcement departments directly. On the other hand, structural social capital was found to be strongly associated with both relational and the cognitive social capital. The findings that structural social capital has no direct relationship with organizational performance but that it has strong correlations with two other social capital

dimensions reveal that structural social capital may have an indirect association with organizational performance via its effect on two other dimensions. In the revised model, relational and cognitive social capital may act as mediating factors between structural social capital and organizational performance. In other words, social interactions between individuals can influence organizational performance by creating elements of relational and cognitive social capital, such as interpersonal trust, shared vision, shared interpretation, and shared understandings. Therefore, the possible indirect effect of structural social capital should be considered and may be included in this theoretical model.

6.2.2. Methodological Implications

A methodological implication pertaining to the performance measurement model used in this study may be drawn from the study results. Performance measurement has always been an important issue in organizational studies. As explained in the previous sections, the results of organizational studies using self-reported and perceptual measures are usually doubted, while objective performance data is often found to be less biased (Huselid, 1995; Kim, 2005; Parhizgari & Gilbert, 2004). Some objective data, such as number of arrests, retail price of drugs, and the amount of drug seized by the departments, have been used to measure narcotics departments' performance (McDavid, 1977; Ostrom, Bogh, Guarsci, Parks, & Whitaker, 1973). For this study, the measurement of organizational performance was based on the perceptions of the police officers. The measurement model included multiple indicators representing various aspects of the organizational performance such as internal and external efficiency, effectiveness, and fairness. The reliability analysis results indicated a good internal consistency score for this scale (Cronbach's alpha: .82). Furthermore, the CFA indicated an adequate model fit, which

means that it was confirmed by the CFA results as a valid measurement model for organizational performance. In addition, a strong positive correlation was found between the aggregated performance score and the number of drug arrests (per officer), which indicates that the performance measure used in this study correlates with the objective measure. This result is also supported by some other organizational studies (Kirkman & Rosen, 1999; McCracken, McIlwain & Fottler, 2001; Walker & Boyne, 2006). Overall, these findings reveal that perceptual performance data should not be totally ignored by researchers. Though it is difficult to generalize this result to all public organizations, it can at least be concluded that self-reported perceptual performance data can be used as a valid measurement for drug law enforcement departments' performance.

6.2.3. Policy and Managerial Implications

This study demonstrates that social capital may significantly contribute to organizational performance in various ways, among them solving coordination problems, facilitating information flow, and improving motivation. Social capital can therefore be interpreted as necessary for drug law enforcement departments because police officers who know, understand, and trust each other are more likely to work together efficiently and effectively towards achieving high-quality organizational performance. Social capital may help eliminate unnecessary task duplication and synchronize team efforts, as well as provide more rapid and effective communication, which may create cost savings and improve performance. In addition, without effective coordination, there is always the risk that teams can unknowingly pursue the same investigative targets, which may result in serious problems for the departments. Social

capital may facilitate coordination and collective action. Based on these results, this study may have some policy and managerial implications.

As a result of enlightened leadership and external forces such as government and public pressure, almost all public organizations in Turkey have started questioning their performance level and initiated performance improvement efforts. Like other public sector organizations, drug law enforcement departments are seeking new ways to improve their effectiveness. However, these efforts are still not seen as adequate, and public-sector organizations are slow to change because of excessive bureaucracy, outdated management styles, and the presence of monopolies on certain services. Because of the rigid hierarchical characteristics of the administrative structure of the TNP, the rational organizational approach has been the most powerful management style for more than a century, and managers have relied primarily son formal rules and formal organizational structures. However, according to the findings of this study, informal structures shaped by informal interactions among members within an organization may also be an important factor for organizational performance. Therefore, the informal structure of the departments should also be taken into account by police managers in the management process.

As a policy implication, the study suggests that it is important to select police administrators who recognize the significance of social capital. Policy makers should implement policies that encourage public administrators to create work environments that facilitate the development of social capital. For example, promoting administrators who understand how to develop and utilize social capital for effective departments may be a productive policy option.

The findings of the study confirm the hypothesized relationships between relational and cognitive social capital and organizational performance. The indicators of the performance latent

variable reflect various aspects of organizational performance such as productivity, efficiency, quality of service, fairness, goal attainment, and customer satisfaction. As explained before, while relational social capital is reflected by the normative qualities of relationships among officers, such as trust and reciprocity, the indicators of cognitive social capital are shared language, shared interpretation, and shared vision. Therefore, investing in the development of social interactions and trust building within organizations is important for administrators aiming to improve narcotics departments' performance. The previous studies also provided broad support for the argument that relational and cognitive social capital may positively influence performance in several ways.

First of all, as discussed in the literature review, information sharing is crucial for drug law enforcement performance. How relational and cognitive social capital may increase information dissemination within departments has already been discussed. Drug trafficking is a more complicated crime type and is more difficult to investigate than many other crimes. Unlike regular police work, drug law enforcement relies primarily on more advanced and complicated techniques such as high-level undercover operations, wiretappings, the use of informants, surveillance, and tracking of financial activities (Kleiman & Smith, 1990). Information sharing plays a very important role because narcotics operations against drug trafficking organizations rely to a large extent on having timely and accurate information. Without effective information sharing among officers and teams within departments, it may not be possible to identify drug transportation routes, dismantle distribution networks, and interdict money-laundering activities (Monge, Fulk, Parnassa, Flanagin, Rumsey, & Kalman, 1996). It has been suggested that individuals in a social context with higher levels of trust are more likely to exchange

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information, knowledge, and new ideas, which may enhance organizational performance (Jaskyte & Dressler, 2005). On the other hand, as Leana and Van Buren (1999) pointed out, social networks may provide even more efficient channels for accessing and sharing information than do formal channels. It may not always be possible to transfer all necessary information and knowledge through formal dissemination channels. For example, undercover operations and informant use are frequent modes of information gathering for narcotics departments. Even though every single step of these processes is officially detailed and explained in the operation procedures, some kinds of knowledge cannot be transferred in this way—namely, how to gain an informant's trust. Such knowledge must be passed from one person to another through various formal and informal interactions. Therefore, managers of drug law enforcement departments should develop strategies for increasing relational and cognitive social capital within their departments. Encouraging officers to participate in social activities, increasing communication between teams, and beefing up in-service training within departments would facilitate the development of social interactions and networks among officers, which may increase interpersonal trust, reciprocity, shared understandings, and shared vision.

Second, the social support aspect of relational social capital may have important implications for narcotics police departments in increasing officers' job performance by helping them cope with stress and burnout. Police officers, particularly drug law enforcement officers, face tremendously stressful events that have a negative impact on their emotional well-being (Deschamps, Pagnon-Badiner, Marchand & Merle, 2003; He, Zhao, & Archbold, 2002), which may result in decreased performance (Goodman, 1990). Relational social capital may play a crucial role in creating and strengthening the emotional links between an officer and his team or

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work group, which provides social support that helps officers cope with psychological issues such as stress, lack of job satisfaction, and burnout (Oh, Chung, & Labiance, 2004). In addition, social capital may have important implications for the adaptation of newcomer officers. The adaptation of newcomer officers can take a long time, and they may face serious difficulties during this period that could constitute significant threats to the performance of the department (e.g., making serious mistakes that could negatively affect the reputation and legitimacy of the department). By helping newcomers obtain the necessary information and providing an appropriate working environment, relational social capital improves their ability their ability to adjust and adapt efficiently. Therefore, administrators may want to increase organizational social capital, which is a valuable asset in addressing the organizational issues mentioned above. By promoting informal interactions and relationships within departments, police administrators can facilitate the development of trust and reciprocity among officers.

The study results may have also some leadership implications. In Turkey, informal interactions are often perceived by police managers as threats to departments' performance. They often believe that if social interaction among officers increases, the hierarchical structure and their own administrative authority will be eroded or lost. However, leaders in law enforcement departments should recognize the importance of and positive outcomes derived from social networks. Allowing police officers to socially interact, which may build trust among them, will not erode the hierarchical structure or constrain supervisors' power over their departments. On the contrary, social interaction among officers may help them achieve higher levels of performance.

Senior TNP officers are traditionally unwilling to allow police officers to become involved in organizational processes. However, the participation of the officers is crucial for both successful crime-fighting operations and the development of social capital. For example, police officers are not allowed to participate in the planning stages of important drug operations. Yet their participation is crucial not only to secure a successful operation but also for the development of social capital, which may result in long-term organizational success. Officer participation should not be limited to drug operations. Increased officer participation in planning initiatives could also help build trust between supervisors and subordinates. Therefore, officers' engagement in all organizational processes could offer a significant opportunity for leaders to promote social interactions and develop social capital.

The indicators of social capital may provide police administrators with valuable insights about developing social capital. By examining these indicators, administrators can develop strategies for increasing organizational social capital within their departments. For example, administrators may value reciprocity and a team approach to work, which in turn could increase social capital. To achieve such an outcome, administrators may need to reward team accomplishments and collective actions, which will function as a strong incentive for officers to work together. On the other hand, investing time in bonding activities such as arranging social activities, receptions, and in-service training programs could allow officers to talk to each other freely, communicate, and create relationships within the department. This interaction will likely help them understand what to expect from each other, which may build trust and cognitive social capital.

Based on the study results, it appears that drug law enforcement departments should pay more attention to promoting social capital among officers. To more effectively fight drug trafficking, agencies should allocate more resources to developing and enhancing social relations and social networks within organizations.

6.3. Contribution of the Study

This quantitative study makes important contributions to the literature and has significant implications for practitioners. By presenting a review of the literature from both public administration and criminal justice fields, this study provides significant insights on organizational social capital. Moreover, the current study also outlines the additional research needed for future studies on organizational social capital.

First, this study makes important contributions to the literature of social capital by examining the concept of social capital at the organizational level in the public sector, a topic which has been addressed only rarely in the literature; the concept of social capital and its outcomes has most often been discussed at the community level. In this sense, Social capital research has to a large extent focused on community social capital and its relevance. Though the number of studies examining the concept of social capital in organizational settings has significantly increased in recent years, the majority of empirical studies on organizational capital in the literature have concentrated on the private sector. By empirically testing a theoretical model of organizational social capital in a more hierarchical and bureaucratic organizational setting, this quantitative study contributes to the social capital literature, which has a limited number of empirical studies on government organizations.

Second, by using a multidimensional conceptual model of organizational social capital, this study makes an empirical contribution to organizational social capital research. The majority of social capital studies have examined this concept as one-dimensional; however, this study shows that the concept of social capital has multiple facets. Empirically testing a multidimensional model created by Nahapiet and Ghoshal (1998), the current study provides more detailed knowledge of the relational, cognitive, and structural dimensions of social capital. In addition, the study's findings clarify how each dimension of social capital affects performance in an organizational context. As well, it empirically demonstrated that organizational social capital is correlated with organizational performance. In addition, the dimensions of organizational social capital in this model have primarily been examined separately without investigating the interrelationships between them. Therefore, this study's empirical testing and confirmation of the correlation between these dimensions of organizational social capital can be considered another contribution.

Third, this study empirically tests the model of organizational social capital in police departments, a topic rarely addressed in the criminal justice literature. By examining the relationship between social capital and the organizational performance of police departments, this study also makes a contribution to criminal justice research. As mentioned earlier, the literature linking the concept of organizational social capital to the field of policing is limited. The available studies in the field of policing have most often examined social capital in the context of community policing. These studies have often focused on how the social capital of the community can be utilized to enhance police-community partnerships to aid police departments' success in crime prevention and investigation. Other studies have concentrated on the possible

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outcomes of social capital in community to reduce crime rates. By investigating social capital within police departments, this study provides significant insights into social relationships among police officers and their relevance to departments' performance.

Finally, this study has practical implications for policy makers and police administrators for the performance of police departments. The study results demonstrated the significance of social relations and social capital among officers in terms of the performance of drug law enforcement departments. It concludes that more interactions among officers and higher-quality relationships among officers are associated with increased organizational performance. Therefore, this study may also benefit police administrators, particularly those who view police departments as rigid hierarchical and bureaucratic structures that rely on administrative rules or as machines that focus only on inputs and outputs, which is often the case in Turkey.

6.4. Limitations

One of the most important limitations of the study is related to its construct validity. Construct validity pertains to the extent to which a scale measures what it is intended to measure. Construct validity is often questioned when studies attempt to measure abstract concepts such as social capital. This may be an issue for this study, as well, because it is difficult to measure completely the dimensions of organizational social capital as well as the outcome variable, organizational performance. Though multiple indicators were included in the measurement models, other important indicators of social capital may still exist that were not included. However, by using the statistical method of structural equation modeling, this limitation was minimized by the study. The confirmatory factor analysis step of SEM allows the researcher to develop and test the validity of measurement models for each latent construct with multiple

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indicators. According to the confirmatory factor analysis, the measurement models for the latent constructs of the study produced satisfactory results to minimize this limitation.

Another important limitation pertains to the measure of organizational performance, which was based on the perceptions of the police officers rather than on objective performance data. Police officers' perception about performance may not reflect the actual performance of their departments. As explained earlier, self-reported and perceptual measures are often questioned when it comes to validity. Since objective performance measures are often considered to be less biased (Huselid, 1995; Kim, 2005; Parhizgari & Gilbert, 2004), the study might use objective performance data along with the perceptual data. To minimize the impact of this limitation, a correlation analysis was conducted to explore whether the aggregated perceived performance score was correlated with an objective measure (the number of drug arrests per officer made in the departments). Even though a strong correlation was found between the aggregated performance scores of the departments and the number of drug arrests, it is still difficult to conclude that all other objective performance measures are correlated with perceived performance scores. Therefore, it is important to be careful in interpreting the study results.

Compared to the number of police officers, the number of ranking police officers in the study was small, which may be an important limitation for the study in analyzing the real effect of hierarchical rank on performance. While 265 respondents were police officers, 52 respondents were sergeants or higher. This may be why hierarchical rank did not have a significant impact on organizational performance. However, these statistics are consistent with the distribution of the whole population of officers in drug law enforcement departments in terms of hierarchical rank.

Organizational performance is a broad concept, and a number of possible factors can affect organizational performance depending on the context. Some individual and department-level factors that might affect organizational performance were included as control variables in this study. However, other factors affecting performance may exist that were not included. It is important to consider this limitation when making inferences based on the study results.

Another limitation has to do with the measurement of structural social capital. The measurement of structural social capital was based on the police officers' perception about the extent to which interactions, informal relationships, and connections exist among them within the departments. These indicators may have limitations in reflecting the actual structural characteristics of relationships. In addition, CFA results indicate that compared to the indicators of two other social capital dimensions, the structural social capital indicators provided the lowest factor loadings. Therefore, a better measurement for structural social capital, comprising actual interactions and connections among officers and the characteristics of those ties, such as density, might be used.

Finally, this theoretical model was created by Nahapiet and Ghoshal (1998) and tested in organizational contexts primarily in Western countries. As mentioned earlier, since social interactions and behaviors are the main components of the social capital concept, the model may produce different results in different national cultures. Therefore, this model may need more research and may need to be modified as a result of further research.

6.5. Future Research

This study found no direct relationship between structural social capital and organizational performance, meaning that a higher quantity of social interaction among officers

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does not necessarily have a direct influence on performance. As discussed earlier, this result indicates that structural social capital may have an indirect effect on performance through relational and cognitive social capital. By modifying the three-dimensional social capital model, future studies may examine relational and cognitive social capital as mediating factors between structural social capital and organizational performance.

In this study, the organizational performance variable was based on the perceptions of police officers in drug enforcement departments. As discussed in the limitation section, self-reported perceptual performance measures are considered to be biased. Police officers' perceptions about performance may be deficient in reflecting the actual performance of the departments. Therefore, to improve measurement validity, future studies should combine objective performance data and perceptual data to measure organizational performance. In addition, to overcome possible deficiencies in the measurement of social capital, the measurement instrument could be improved. For example, structural social capital could be measured via indicators that reflect the density and closeness of relationships among police officers. Future studies could use social network analysis to measure this construct. Based on the social network analysis results, a better measurement model can be developed.

This multidimensional social capital model may produce research questions for future studies that will focus on interorganizational cooperation. The social capital theoretical model can be applied to interorganizational networks, which may have significant implications for organizational performance. For example, departments with higher levels of social capital may be more likely to engage in information sharing with other departments. Future studies could

examine the possible impact of social capital on relationships beyond organizational boundaries, which could improve performance.

The consequences or outcomes of organizational social capital have been widely examined and well documented in the literature. However, the number of studies focusing on possible sources of organizational social capital is limited. The current study also demonstrated that social capital may have significant outcomes for organizations. Therefore, examining the possible sources and determinants of social capital is another important topic for future studies. What creates or increases social capital should also be studied to explore ways of building social capital. The results of these prospective studies will likely have important implications for public administrators and leaders, enabling them to create work environments that promote social capital.

The concept of organizational performance contains various dimensions, such as efficiency, quality, and effectiveness. In order to explain more deeply how social capital impacts these different aspects of performance, future research may develop a separate latent variable for each dimension of performance. This articulation may allow researchers to explore how each social capital dimension affects different aspects of organizational performance.

Finally, cultural differences should be taken into account when examining the relationship between social capital and performance. Hofstede (2001) suggested that people in different cultures behave differently. As well, he analyzes national cultures based on various dimensions under five different categories, including individualism, masculinity, and power distance. The effect of social capital dimensions on organizational performance may vary in different cultures. For example, structural social capital may be more influential in organizations

operating in more collectivist cultures. Therefore, future studies should compare social capital outcomes by including organizations from different national cultures and considering cultural differences.

APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: UCF Institutional Review Board #1
        FWA00000351, IRB00001138

To: Ismail Sahin

Date: November 10, 2009

Dear Researcher:

On 11/10/2009, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination
Project Title: Organizational Social Capital and Perceived Performance of Drug
                Law Enforcement Departments: A Case Study in Turkey
Investigator: Ismail Sahin
IRB Number: SBE-09-06513
Funding Agency:
Grant Title:
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Joseph Bielitzki, DVM, UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 11/10/2009 08:50:39 AM EST

IRB Coordinator

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APPENDIX B: OFFICIAL PERMISSION LETTER FROM TNP

T.C.
İÇİŞLERİ BAKANLIĞI
Emniyet Genel Müdürlüğü
Dışilişkiler Daire Başkanlığı

SAYI	: B.05.1.EGM.0.76.04.02 / 2939
TARİH	:07/06/2007
KONU	:Genel Akademik Araştırma Onayı.
İLGİ	:a) 23.03.2007 tarih ve B.05.1.EGM.0.76.04.02.
	(31004).871/1501 sayılı yazı.
	b) 12.04.2007 tarih ve B.05.1.EGM.0.72.02.03-
	857-1480 sayılı yazı.

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Dışilişkiler Dairesi Başkanı
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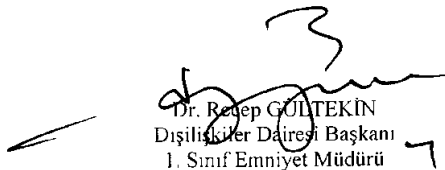
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İlgi (a) kayıtlı yazı ile mastır ve doktora yapmakta olan personelimizin eğitim gördüğü kendi alanlarıyla ilgili tez, akademik çalışma, makale gibi akademik araştırmalarda kullanmak üzere; Teşkilatımız bünyesindeki birimlerden gerekli istatistikî bilgilerin alınması ve bazı anket ve mülakat gibi akademik çalışmaların uygulanabilmesi için Emniyet Genel Müdürlüğü Makamından genel bir onay alınması Eğitim Daire Başkanlığı'ndan talep edilmiştir.

Adı geçen Daire Başkanlığı'ndan alınan ilgi (b) kayıtlı yazı ile "Yetiştirilmek Amacıyla Yurtdışına Gönderilecek Devlet Memurları Hakkındaki Yönetmelik" hükümleri çerçevesinde yurtdışındaki üniversitelere mastır ve doktora yapmak üzere gönderilen personelin Genel Müdürlüğümüze bağlı birimlerde ve taşra teşkilatında akademik çalışma yapma talebinde bulunması halinde tez çalışması yapabilmesi uygun görüldüğü belirtilmiş olup Genel Müdürlük Makam Onayın bir sureti ekte gönderilmiştir.

Bilgi ve gereğini rica ederim.

Dr. Recep GÜLTEKİN
Dışilişkiler Dairesi Başkanı
1. Sınıf Emniyet Müdürü

Ek:
İlgi (b) kayıtlı yazı. (2 sayfa)

ADRES: Emniyet Genel Müdürlüğü, Dışilişkiler Daire Başkanlığı
İlkadım Cad. 89/10 (S.Blok) 06100 Y.Ayrancı /ANKARA

APPENDIX C: SURVEY INSTRUMENT

SURVEY

Instructions:
The following survey utilizes a five point Likert scale ranging from negative to neutral to positive choices, including "Strongly Disagree," "Disagree," "Neutral," "Agree," and "Strongly Agree." Please choose the scale that is most closely applicable for each statement.

Section 1. Perceived Organizational Performance:
Please indicate the extent to which you agree with each statement regarding performance of your organization. Choose only one answer for each statement.

1. My organization has made good use of my knowledge and skills in looking for ways to become more efficient.

    ( ) Strongly Disagree
    ( ) Disagree
    ( ) Neutral
    ( ) Agree
    ( ) Strongly Agree

2. My organization is trying to reduce cost in managing organization and performing works.
    ( ) Strongly Disagree
    ( ) Disagree
    ( ) Neutral
    ( ) Agree
    ( ) Strongly Agree

3. The productivity of my organization is high.
    ( ) Strongly Disagree
    ( ) Disagree
    ( ) Neutral
    ( ) Agree
    ( ) Strongly Agree

4. Overall, the quality of work performed by my current coworkers in my immediate work group is high.
    ( ) Strongly Disagree
    ( ) Disagree
    ( ) Neutral
    ( ) Agree
    ( ) Strongly Agree

5. My organization provides fair and equitable treatment for employees and applicants in all aspects of personnel management without regard to their political affiliation, sex, hometown, marital status, age, or handicapping condition.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

6. In general, all are treated with respect in my organization, with no regard to status and grade.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

7. My organization has conducted business relations with outside customers very promptly.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

8. It is rare to make big mistakes in my organization when conducting work.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

9. The work performed by my organization provides the public a worthwhile return on their tax money.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

10. The occurrence of goal attainment is very high in my organization.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree

( ) Strongly Agree

11. My organization provides fair and equitable services to the public, with no consideration of their individual backgrounds.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

12. Customer satisfaction with my organization is very high.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

Section 2. Organizational Social Capital:
Please indicate the extent to which you agree with each statement regarding social capital in your organization. Choose only one answer for each statement.

Relational Dimension of Organizational Social Capital:

13. In this department, we respect each other's competencies.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

14. In this department, every officer shows integrity.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

15. In this department, we expect the complete truth from each other.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

16. In this department, we all fully trust one another.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

17. In this department, we count on each other to fully live up to our word.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

Cognitive Dimension of Organizational Social Capital:

18. In this department, we explain work-related ideas or thoughts using the same kind of vocabulary or jargon.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

19. In this department, we can easily communicate with each other at work.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

20. In this department, we interpret organizational events and experiences similarly.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

21. In this department, we perceive the motives of other officers similarly.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree

( ) Strongly Agree

22. In this department, we share the same vision for what the organization should accomplish.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

Structural Dimension of Organizational Social Capital:

23. I am able to work with my coworkers to collectively solve problems.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

24. In this department, I have the chance to talk informally and visit with others.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

25. I socialize with coworkers outside of the workplace.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

26. I often talk to coworkers about the work-related issues.
( ) Strongly Disagree
( ) Disagree
( ) Neutral
( ) Agree
( ) Strongly Agree

27. I exchange job related experience with other workers.
( ) Strongly Disagree
( ) Disagree
( ) Neutral

( ) Agree

( ) Strongly Agree

Section 3. Demographic Information: The following questions are intended to identify demographical information. Please choose only one best answer.

28. Please provide the name of your department.

[ ] Istanbul   [ ] Ankara   [ ] Izmir   [ ] Adana   [ ] Antalya

[ ] Kocaeli   [ ] Erzurum   [ ] Diyarbakir   [ ] K.Maras

[ ] Malataya   [ ] Gaziantep   [ ] Agri   [ ] Van   [ ] Yozgat

29. What is the highest degree you have completed?

[ ] High School   [ ] Two-Year College

[ ] Bachelor of Arts/Science   [ ] Master of Arts/Science   [ ] Ph.D.

30. What is your rank?

[ ] Police Officer   [ ] Sergeant and Lieutenant   [ ] Captain and Higher

31. How long have you been working in this department?

[ ] Less than 2 Years   [ ] 3-5 Years

[ ] 5-8 Years   [ ] More than 8 Years

32. Within the last year, how many appreciation letter have you received? Please indicate below:
[......]

33. Within the last year, how many recognition awards (salary award) have you received? Please indicate below:
[......]

Thank You!

APPENDIX D: TABLES

Table 20: The Frequency and Percentage Distributions of Control Variables

Variable		Attribute	Frequency	Percent	Cumulative Percent
Size	1	Less than 50	75	23.7	23.7
	2	51-120	73	23	46.7
	3	121-200	64	20.2	66.9
	4	201-300	34	10.7	77.6
	5	301 and More	71	22.4	100
		Total	317	100	
Crimerate	1	Less than 50	38	12	12
	2	51-200	51	16.1	28.1
	3	201-500	98	30.9	59
	4	501-1000	59	18.6	77.6
	5	1001 and More	71	22.4	100
		Total	317	100	
Education	1	High School	30	9.5	9.5
	2	Two-Year College	119	37.5	47
	3	Bachelor of Arts/Science	156	49.2	96.2
	4	Master of Arts/Science	9	2.8	99.1
	5	Ph.D.	3	0.9	100
		Total	317	100	
Rank	1	Police Officer	265	83.6	83.6
	2	Sergeant and Lieutenant	24	7.6	91.2
	3	Captain and Higher	28	8.8	100
		Total	317	100	
Tenure	1	Less than 2 Years	97	30.6	30.6
	2	3-5 Years	110	34.7	65.3
	3	5-8 Years	69	21.8	87.1
	4	More than 8 Years	41	12.9	100
		Total	317	100	

Approximately fifty percent of the all responses were received from departments having fewer than 120 sworn officers. The respondents (71) from the largest departments (with more than 300 officers) constituted 22.4 % of all the respondents. Of the total 517 respondents, 75 respondents (23.7%) worked for small departments having less than 50 sworn officers. As explained before, the crime rate was measured by the number of drug cases reported by each city department in the last year. Ninety-eight (30.9%) respondents in the sample were from drug law enforcement departments that reported between 201 and 500 drug cases in 2009. Only 12% of the respondents worked in jurisdictions that were less intense in terms of drug activities (handling less than 50 cases per year). The frequency distribution of respondents by officer tenure as measured with years of service in the respective departments was also displayed in Table 3. It indicates that of the total 317 respondents, 110 respondents (34.7%) had between three and five years of service in their current departments, which represents the greatest portion of all the respondents. 75.3% of the respondents had less than five years of service in their current departments. This result is not surprising, since mandatory rotation between the departments in the eastern and western part of Turkey decreases officers' average years of service in the same department.

Table 21: The Frequency and Percentage Distributions of Organizational Performance

Variable	Attribute		Frequency	Percent	Cumulative Percent
Salaryaward	1	0	12	3.8	3.8
	2	1-15	52	16.4	20.2
	3	16-25	119	37.5	57.7
	4	26-50	103	32.5	90.2
	5	51 and more	31	9.8	100
	Total		317	100	
Useofskill	1	Strongly Disagree	14	4.4	4.4
	2	Disagree	60	18.9	23.3
	3	Neutral	48	15.1	38.5
	4	Agree	157	49.5	88
	5	Strongly Agree	38	12	100
	Total		317	100	
Reducedcost	1	Strongly Disagree	5	1.6	1.6
	2	Disagree	69	21.8	23.3
	3	Neutral	47	14.8	38.2
	4	Agree	160	50.5	88.6
	5	Strongly Agree	36	11.4	100
	Total		317	100	
Productivity	1	Strongly Disagree	4	1.3	1.3
	2	Disagree	28	8.8	10.1
	3	Neutral	28	8.8	18.9
	4	Agree	174	54.9	73.8
	5	Strongly Agree	83	26.2	100
	Total		317	100	
Quality	1	Strongly Disagree	7	2.2	2.2
	2	Disagree	24	7.6	9.8
	3	Neutral	49	15.5	25.2
	4	Agree	154	48.6	73.8
	5	Strongly Agree	83	26.2	100
	Total		317	100	
Fairtreatment	1	Strongly Disagree	22	6.9	6.9
	2	Disagree	33	10.4	17.4
	3	Neutral	30	9.5	26.8
	4	Agree	134	42.3	69.1
	5	Strongly Agree	98	30.9	100
	Total		317	100	

Treatrespect	1	Strongly Disagree	12	3.8	3.8
	2	Disagree	56	17.7	21.5
	3	Neutral	75	23.7	45.1
	4	Agree	121	38.2	83.3
	5	Strongly Agree	53	16.7	100
	Total		317	100	
Externrelations	1	Strongly Disagree	9	2.8	2.8
	2	Disagree	28	8.8	11.7
	3	Neutral	28	8.8	20.5
	4	Agree	183	57.7	78.2
	5	Strongly Agree	69	21.8	100
	Total		317	100	
Mistakes	1	Strongly Disagree	17	5.4	5.4
	2	Disagree	80	25.2	30.6
	3	Neutral	43	13.6	44.2
	4	Agree	136	42.9	87.1
	5	Strongly Agree	41	12.9	100
	Total		317	100	
Worthserv	1	Strongly Disagree	9	2.8	2.8
	2	Disagree	18	5.7	8.5
	3	Neutral	46	14.5	23
	4	Agree	187	59	82
	5	Strongly Agree	57	18	100
	Total		317	100	
Goalattain	1	Strongly Disagree	1	0.3	0.3
	2	Disagree	30	9.5	9.8
	3	Neutral	41	12.9	22.7
	4	Agree	164	51.7	74.4
	5	Strongly Agree	81	25.6	100
	Total		317	100	
Equitableserv	1	Strongly Disagree	5	1.6	1.6
	2	Disagree	15	4.7	6.3
	3	Neutral	101	31.9	38.2
	4	Agree	126	39.7	77.9
	5	Strongly Agree	70	22.1	100
	Total		317	100	
Custsatisfact	1	Strongly Disagree	2	0.6	0.6
	2	Disagree	15	4.7	5.4
	3	Neutral	57	18	23.3
	4	Agree	164	51.7	75.1

5 Strongly Agree	79	24.9	100	
Total	317	100		

Table 22: The Correlation Matrix of Control Variables

		Size	Crimerate	Education	Rank	Tenure
Size	Correlation Coefficient	1				
	Sig. (2-tailed)	.				
	N	317				
Crimerate	Correlation Coefficient	.910[**]	1			
	Sig. (2-tailed)	0	.			
	N	317	317			
Education	Correlation Coefficient	0.074	.111[*]	1		
	Sig. (2-tailed)	0.19	0.049	.		
	N	317	317	317		
Rank	Correlation Coefficient	0.044	0.081	.440[**]	1	
	Sig. (2-tailed)	0.437	0.151	0	.	
	N	317	317	317	317	
Tenure	Correlation Coefficient	-.129[*]	-.163[**]	-.147[**]	0.015	1
	Sig. (2-tailed)	0.022	0.004	0.009	0.795	.
	N	317	317	317	317	317

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

Table 23: The Correlation Matrix of Relational Social Capital

		Respect	Integrity	Expecttruth	Trust	Liveuptoword
Respect	Correlation Coefficient	1				
	Sig. (2-tailed)	.				
	N	317				
Integrity	Correlation Coefficient	.433[**]	1			
	Sig. (2-tailed)	0	.			
	N	317	317			
Expecttruth	Correlation Coefficient	.456[**]	.470[**]	1		
	Sig. (2-tailed)	0	0	.		
	N	317	317	317		
Trust	Correlation Coefficient	.209[**]	.368[**]	.250[**]	1	
	Sig. (2-tailed)	0	0	0	.	
	N	317	317	317	317	
Liveuptoword	Correlation Coefficient	.266[**]	.381[**]	.175[**]	.312[**]	1
	Sig. (2-tailed)	0	0	0.002	0	.
	N	317	317	317	317	317

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

Table 24: The Correlation Matrix of Cognitive Social Capital

		Sharedlanguage	Communicate	Sharedinterpret	Motivepercept	Sharedvision
Sharedlanguag	Correlation Coefficient	1				
	Sig. (2-tailed)	.				
	N	317				
Communicate	Correlation Coefficient	.570[**]	1			
	Sig. (2-tailed)	0	.			
	N	317	317			
Sharedinterpret	Correlation Coefficient	.466[**]	.478[**]	1		
	Sig. (2-tailed)	0	0	.		
	N	317	317	317		
Motivepercept	Correlation Coefficient	.476[**]	.525[**]	.534[**]	1	
	Sig. (2-tailed)	0	0	0	.	
	N	317	317	317	317	
Sharedvision	Correlation Coefficient	.473[**]	.452[**]	.447[**]	.482[**]	1
	Sig. (2-tailed)	0	0	0	0	.
	N	317	317	317	317	317

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

Table 25: The Correlation Matrix of Structural Social Capital

		Teamwork	Informal	Socializing	Interaction	Exchange
Teamwork	Correlation Coefficient	1				
	Sig. (2-tailed)	.				
	N	317				
Informal	Correlation Coefficient	.348[**]	1			
	Sig. (2-tailed)	0	.			
	N	317	317			
Socializing	Correlation Coefficient	.285[**]	.566[**]	1		
	Sig. (2-tailed)	0	0	.		
	N	317	317	317		
Interaction	Correlation Coefficient	.245[**]	.229[**]	.211[**]	1	
	Sig. (2-tailed)	0	0	0	.	
	N	317	317	317	317	
Exchange	Correlation Coefficient	.215[**]	.260[**]	.208[**]	.551[**]	1
	Sig. (2-tailed)	0	0	0	0	.
	N	317	317	317	317	317

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

Table 26: The Correlation Matrix of Organizational Performance

		P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13
Salaryaward	Correlation Coefficient	1												
	Sig. (2-tailed)	.												
	N	317												
Useofskill	Correlation Coefficient	.636[**]	1											
	Sig. (2-tailed)	0	.											
	N	317	317											
Reducedcost	Correlation Coefficient	.225[**]	.320[**]	1										
	Sig. (2-tailed)	0	0	.										
	N	317	317	317										
Productivity	Correlation Coefficient	.331[**]	.379[**]	.207[**]	1									
	Sig. (2-tailed)	0	0	0	.									
	N	317	317	317	317									
Quality	Correlation Coefficient	.241[**]	.319[**]	.249[**]	.436[**]	1								
	Sig. (2-tailed)	0	0	0	0	.								
	N	317	317	317	317	317								
Fairtreatment	Correlation Coefficient	.249[**]	.305[**]	.271[**]	.389[**]	.371[**]	1							
	Sig. (2-tailed)	0	0	0	0	0	.							
	N	317	317	317	317	317	317							
Treatrespect	Correlation Coefficient	.183[**]	.144[*]	.112[*]	.225[**]	.181[**]	.373[**]	1						
	Sig. (2-tailed)	0.001	0.011	0.046	0	0.001	0	.						
	N	317	317	317	317	317	317	317						

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		1	2	3	4	5	6	7	8	9	10	11	12	13
Externrelations	Correlation Coefficient	.241**	.296**	.248**	.378**	.298**	.534**	.281**	1					
	Sig. (2-tailed)	0	0	0	0	0	0	0	.					
	N	317	317	317	317	317	317	317	317					
Mistakes	Correlation Coefficient	0.046	.126*	.148**	.157**	.129*	.167**	0.099	.174**	1				
	Sig. (2-tailed)	0.419	0.025	0.008	0.005	0.021	0.003	0.078	0.002	.				
	N	317	317	317	317	317	317	317	317	317				
Worthserv	Correlation Coefficient	.293**	.301**	.293**	.337**	.343**	.297**	.238**	.296**	.143*	1			
	Sig. (2-tailed)	0	0	0	0	0	0	0	0	0	.			
	N	317	317	317	317	317	317	317	317	317	317			
Goalattain	Correlation Coefficient	.228**	.307**	.229**	.511**	.452**	.357**	.256**	.433**	0.1	.401**	1		
	Sig. (2-tailed)	0	0	0	0	0	0	0	0	0.1	0	.		
	N	317	317	317	317	317	317	317	317	317	317	317		
Equitableserv	Correlation Coefficient	.150**	.116*	.159**	.209**	.175**	.279**	.150**	.245**	0.1	.181**	.191**	1	
	Sig. (2-tailed)	0.008	0.04	0.005	0	0.002	0	0.008	0	0.4	0.001	0.001	.	
	N	317	317	317	317	317	317	317	317	317	317	317	317	
Custsatisfact	Correlation Coefficient	.187**	.208**	.206**	.333**	.311**	.296**	.121*	.355**	.148**	.339**	.436**	.352**	1
	Sig. (2-tailed)	0.001	0	0	0	0	0	0.031	0	0	0	0	0	.
	N	317	317	317	317	317	317	317	317	317	317	317	317	317

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

Table 27: Correlation Matrix for Control Variables and Relational Social Capital

		Size	Crimerate	Education	Rank	Tenure	Respect	Integrity	Expecttruth	Trust	Liveuptoword
Size	Correlation Coefficient	1									
	Sig. (2-tailed)	.									
	N	317									
Crimerate	Correlation Coefficient	.910**	1								
	Sig. (2-tailed)	0	.								
	N	317	317								
Education	Correlation Coefficient	0.074	.111*	1							
	Sig. (2-tailed)	0.19	0.049	.							
	N	317	317	317							
Rank	Correlation Coefficient	0.044	0.081	.440**	1						
	Sig. (2-tailed)	0.437	0.151	0	.						
	N	317	317	317	317						
Tenure	Correlation Coefficient	-.129*	-.163**	-.147**	0.015	1					
	Sig. (2-tailed)	0.022	0.004	0.009	0.795	.					
	N	317	317	317	317	317					
Respect	Correlation Coefficient	0.037	0.077	0.095	0.026	-0.023	1				
	Sig. (2-tailed)	0.507	0.174	0.09	0.639	0.69	.				

	N	317	317	317	317	317	317				
Integrity	Correlation Coefficient	-0.049	-0.006	0.073	-0.047	-0.035	.433**	1			
	Sig. (2-tailed)	0.386	0.912	0.193	0.402	0.536	0	.			
	N	317	317	317	317	317	317	317			
Expecttruth	Correlation Coefficient	-0.019	0.006	0.055	-0.043	0.032	.456**	.470**	1		
	Sig. (2-tailed)	0.733	0.912	0.325	0.441	0.574	0	0	.		
	N	317	317	317	317	317	317	317	317		
Trust	Correlation Coefficient	-0.11	-.128*	0.025	-0.028	.136*	.209**	.368**	.250**	1	
	Sig. (2-tailed)	0.05	0.023	0.658	0.615	0.016	0	0	0	.	
	N	317	317	317	317	317	317	317	317	317	
Liveuptoword	Correlation Coefficient	-0.075	-0.096	0.084	-0.016	0.084	.266**	.381**	.175**	.312**	1
	Sig. (2-tailed)	0.185	0.089	0.135	0.778	0.138	0	0	0.002	0	.
	N	317	317	317	317	317	317	317	317	317	317

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

Table 28: Correlation Matrix for Control Variables and Cognitive Social Capital

		Size	Crimerate	Education	Rank	Tenure	Sharedlang	Communicate	Sharedinterp	Motiveperc	Sharedvision
Size	Correlation Coefficient	1									
	Sig. (2-tailed)	.									
	N	317									
Crimerate	Correlation Coefficient	.910**	1								
	Sig. (2-tailed)	0	.								
	N	317	317								
Education	Correlation Coefficient	0.074	.111*	1							
	Sig. (2-tailed)	0.19	0.049	.							
	N	317	317	317							
Rank	Correlation Coefficient	0.044	0.081	.440**	1						
	Sig. (2-tailed)	0.437	0.151	0	.						
	N	317	317	317	317						
Tenure	Correlation Coefficient	-.129*	-.163**	-.147**	0.015	1					
	Sig. (2-tailed)	0.022	0.004	0.009	0.795	.					
	N	317	317	317	317	317					
Sharedlangua	Correlation	-0.069	-0.032	0.071	-	0.051	1				

ge	Coefficient				0.039						
	Sig. (2-tailed)	0.221	0.576	0.206	0.492	0.361	.				
	N	317	317	317	317	317	317				
Communicate	Correlation Coefficient	-0.006	0.011	0.057	0.044	0.069	.570**	1			
	Sig. (2-tailed)	0.912	0.841	0.308	0.435	0.219	0	.			
	N	317	317	317	317	317	317	317			
Sharedinterpret	Correlation Coefficient	-0.021	0.004	0.105	-0.036	0.059	.466**	.478**	1		
	Sig. (2-tailed)	0.707	0.941	0.062	0.518	0.291	0	0	.		
	N	317	317	317	317	317	317	317	317		
Motivepercept	Correlation Coefficient	-0.037	-0.027	0.063	0.088	0.014	.476**	.525**	.534**	1	
	Sig. (2-tailed)	0.509	0.636	0.261	0.12	0.799	0	0	0	.	
	N	317	317	317	317	317	317	317	317	317	
Sharedvision	Correlation Coefficient	0.006	0.057	-0.01	-0.061	0.052	.473**	.452**	.447**	.482**	1
	Sig. (2-tailed)	0.917	0.314	0.861	0.28	0.358	0	0	0	0	.
	N	317	317	317	317	317	317	317	317	317	317

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

Table 29: Correlation Matrix for Control Variables and Structural Social Capital

		Size	Crimerate	Education	Rank	Tenure	Teamwork	Informal	Socializing	Interaction	Exchange
Size	Correlation Coefficient	1									
	Sig. (2-tailed)	.									
	N	317									
Crimerate	Correlation Coefficient	.910**	1								
	Sig. (2-tailed)	0	.								
	N	317	317								
Education	Correlation Coefficient	0.074	.111*	1							
	Sig. (2-tailed)	0.19	0.049	.							
	N	317	317	317							
Rank	Correlation Coefficient	0.044	0.081	.440**	1						
	Sig. (2-tailed)	0.437	0.151	0	.						
	N	317	317	317	317						
Tenure	Correlation Coefficient	-.129*	-.163**	-.147**	0.015	1					
	Sig. (2-tailed)	0.022	0.004	0.009	0.795	.					
	N	317	317	317	317	317					
Teamwork	Correlation Coefficient	-0.051	-0.04	.163**	0.108	-0.056	1				
	Sig. (2-tailed)	0.362	0.477	0.004	0.054	0.323	.				
	N	317	317	317	317	317	317				
Informal	Correlation Coefficient	-.189**	-.164**	0.01	0.048	0.044	.348**	1			

	Sig. (2-tailed)	0.001	0.003	0.854	0.396	0.438	0	.			
	N	317	317	317	317	317	317	317			
Socializing	Correlation Coefficient	-.196**	-.205**	0.027	0.019	0.106	.285**	.566**	1		
	Sig. (2-tailed)	0	0	0.631	0.736	0.059	0	0	.		
	N	317	317	317	317	317	317	317	317		
Interaction	Correlation Coefficient	0.097	0.096	.111*	.218**	0.034	.245**	.229**	.211**	1	
	Sig. (2-tailed)	0.086	0.087	0.049	0	0.551	0	0	0	.	
	N	317	317	317	317	317	317	317	317	317	
Exchange	Correlation Coefficient	0.054	0.075	0.005	.129*	0.039	.215**	.260**	.208**	.551**	1
	Sig. (2-tailed)	0.34	0.183	0.93	0.022	0.487	0	0	0	0	.
	N	317	317	317	317	317	317	317	317	317	317

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

Table 30: Distributions of Aggregated Performance Scores and Arrest Numbers by Departments

Departments	Performance Score	Number of Arrest*	Number of Arrest Per Officer*
Istanbul	3.716	4850	13.86
Ankara	3.703	1830	8.32
Izmir	3.55	2024	8.10
Adana	3.715	2058	14.70
Antalya	3.673	1577	14.34
Kocaeli	3.633	971	9.71
Erzurum	3.414	241	4.92
Diyarbakir	3.308	991	5.51
Gaziantep	4.196	1067	12.55
Agri	3.335	171	4.89
Van	3.813	[a]	[a]
Yozgat	3.824	[a]	[a]

*. 2009 data

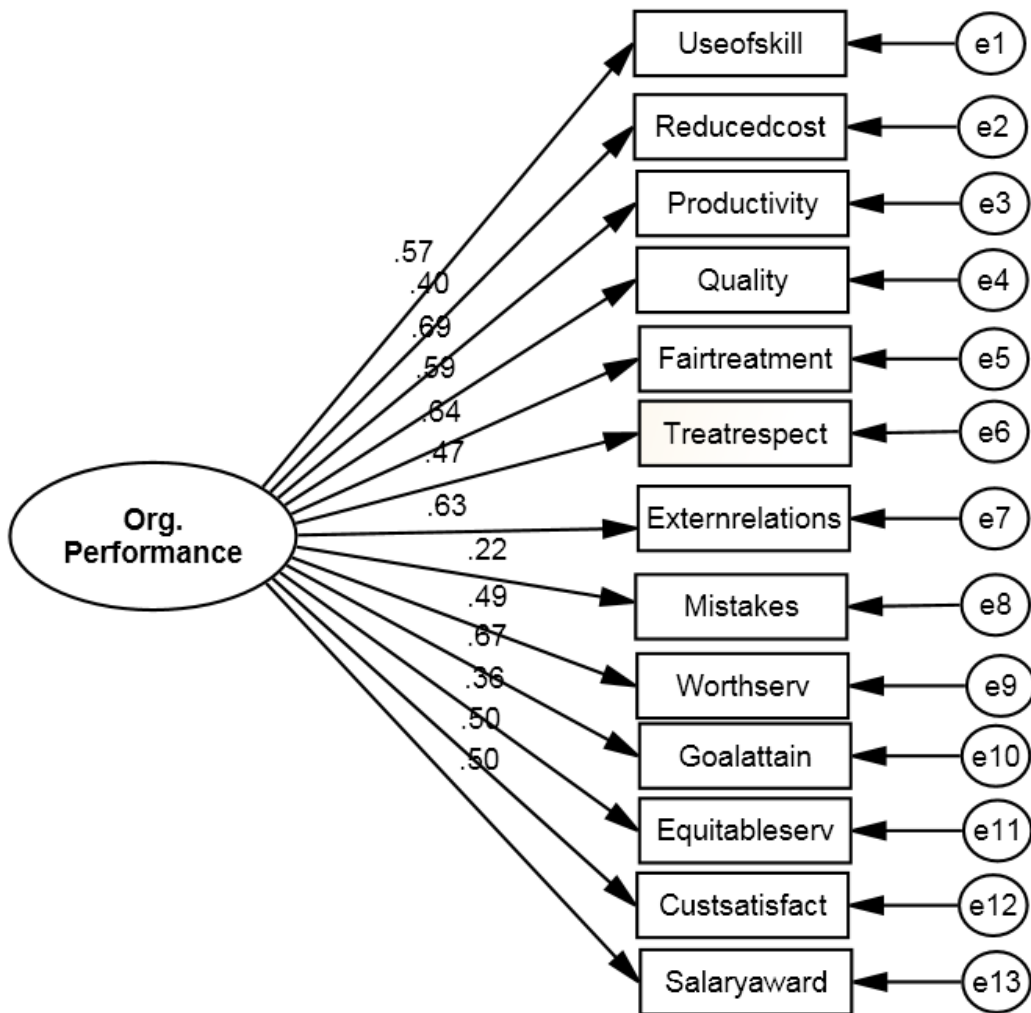[a]. Data not available

APPENDIX E: SEM FIGURES
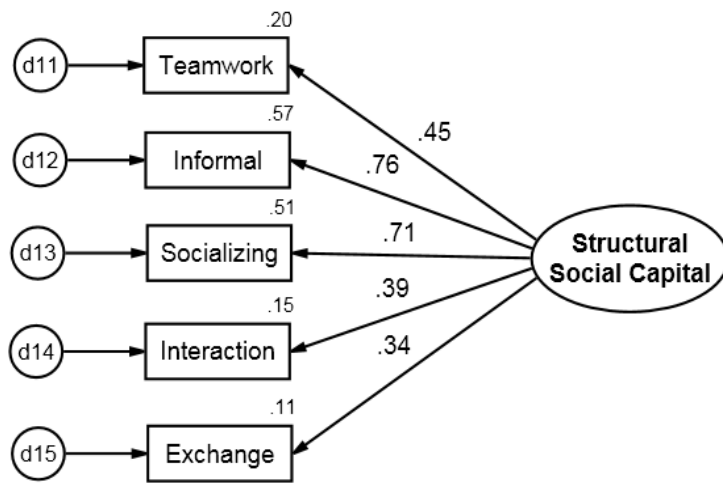
Figure 15. A Generic Model of Structural Social Capital
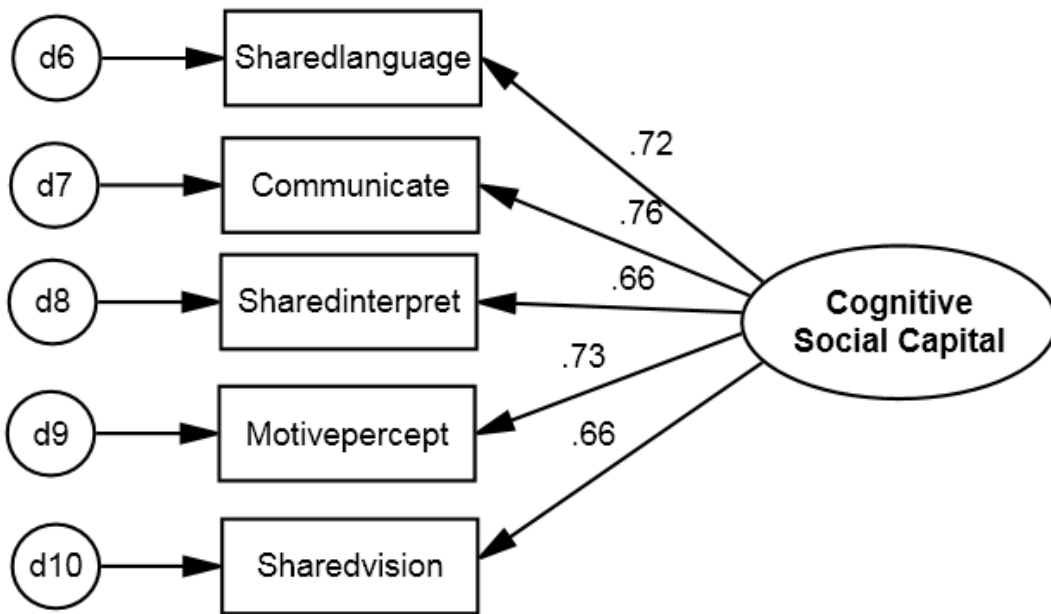
Figure 16. A Generic Model of Cognitive Social Capital
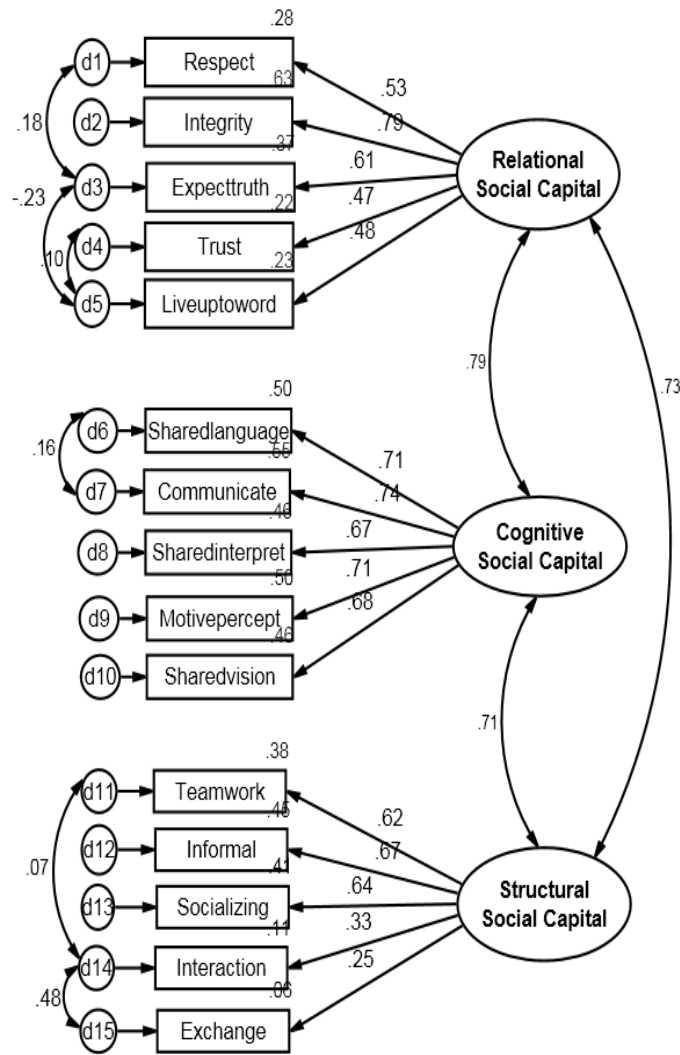
Figure 17. A Generic Three-Factor Model

Figure 18. A Generic Model of Organizational Performance

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