CAN SOCIAL CAPITAL EXPLAIN THE PROPERTY CRIMES IN TURKEY?

Sosyal Sermaye Türkiye'de Mala Karşı İşlenen Suçları Açıklar mı?[1]

Fatih IRMAK[*]

———— **Özet** ————

S uç oranlarının açıklanmasına ilişkin çalışmalarda farklı teorik modellerde pek çok sosyal ve ekonomik değişken geniş ölçüde kullanılmıştır. Ancak, çok az sayıda ampirik çalışma henüz tam bir teorik çerçeveye oturtulamayan sosyal sermaye yaklaşımı ile suç oranları arasındaki ilişki üzerinde odaklanmıştır. Bu nedenle, bu çalışma ile Türkiye'deki mevcut yazına katkı sağlama amaçlanmıştır. Bununla beraber, sosyal sermaye değişkenlerinin (siyasi katılım, dernek üyeliği, inanç temelli bütünleşme) Türkiye'de il genelindeki suç oranları ile ilişkisinin olup olmadığı ve eğer varsa suç oranlarında gözlenen değişmeyi açıklayıp açıklayamayacağı araştırılmıştır. Ayrıca bu çalışmada, nüfus yoğunluğu, işsizlik oranı, 15-29 arasındaki genç nüfus ve gayri safi milli hâsıla (GSMH) gibi bazı kontrol değişkenlerinin mala karşı işlenen suçlar ile sosyal sermaye arasındaki ilişkiye olan muhtemel etkileri de dikkate alınmıştır. En küçük kareler (Ordinary Least Squares-OLS) regresyon sonuçları, sosyal sermaye göstergelerinin hepsinin il bazındaki suç oranlarını açıklamadığını göstermiştir. Sosyo-ekonomik ve demografik değişkenlerin de etkisi dikkate alındığında, inanç temelli bütünleşme sosyal sermayenin suç oranlarını açıklayan tek göstergesi olmuştur.

Anahtar Kelimeler: Sosyal sermaye, Mala karşı işlenen suçlar, Siyasi katılım, Dernek üyeliği, İnanç temelli bütünleşme.

[*] PhD in Sociology, Turkish National Police, irmax09@hotmail.com

Abstract

In previous studies on the explanation of crime rates, many social and economical variables were largely used in different theoretical frameworks. However, few empirical studies focused on the relationship between social capital approach, which is not based on a certain theoretical framework, and crime rates. Therefore, this study aimed at contributing to the current literature in Turkey. It is also investigated whether indicators of social capital are related to crime rates across the provinces in Turkey, if any, whether social capital can explain observed variation in crime rates. This study also accounted for potential effects of control variables such as population density, unemployment rate, the number of young males aged 15-29 and GDP per capita on the relationship between social capital and property crime rates in Turkey. Ordinary Least Squares (OLS) regression results showed that not all the indicators of social capital explained crime rates across all provinces in Turkey. Faith-based engagement was found to be the only indicator of social capital predicting crime rates, controlling for socioeconomic and demographic variables.

Key Words: Social capital, Property crimes, Political participation, Associational membership, Faith-based engagement.

Introduction: Social Capital and Its Various Interpretations

Many social scientists have widely described and discussed social capital in extant literature. However, it is widely agreed on that this concept is popularized by Bourdieu in 1985 (Portes, 1998) and Coleman in 1988 (Portes, 1998; Berger and Murphy, 2000) and Putnam in 1993 (Portes, 1998).

Bourdieu explains social capital as aggregates of resources related to permanent or transitory social networks (Portes, 1998). For Bourdieu, social capital is instrumental for individuals in the sense that they participate in social networks for building the network as well as pursuing their interest in return to their endeavors in the creation of the network. Bourdieu's social capital has two dimensions: First, individuals access resources through their relationships, and second, the quality of resources. Therefore, utility provided by social capital to the members of social network is also basis of social network (Portes, 1998).

Coleman defines social capital by it's function (Coleman, 1988:98; Portes, 1998). Adopting from the field of economics, Coleman uses principle of rational action in the analysis of social systems, mainly the analysis of social capital and its usefulness (Coleman, 1988:97). For Coleman, social capital depicts one aspect of social system and enables individual actions within that social system. Unlike other forms of capital such as economic and human capital mentioned by Bourdieu (1985) and Becker (1962), social capital exists in the network of relations between actors and organizations (Coleman, 1988:98). It is not lodged in persons or in physical entities. While human capital is created by investing in persons through enhancements of their skills and abilities (Becker, 1962:9), social capital emerges through building of relations among persons, which promotes the ability to act for the utility of all individuals (Coleman, 1988:100). As an example, social trust and norms are different forms of social capital facilitating certain actions of individuals as well as constraining deviant actions in the community (Coleman, 1988:102-105). Besides, as different sources of social capital, social networks and voluntary organizations are functional in increasing the quality of life by providing a wide range of utilities for their members (Coleman, 1988:108).

Similarly, Becker and Murphy (2000) also focus on the function of social capital rather than its various meanings in literature, and they state that social capital shapes individual behaviors positively or negatively in each layer of social structure. Moreover, individuals are also endowed with the selection of social capital. In the selection of social capital, utility maximization is a determinant of individual choices in a specific society. In line with this, selection of neighborhood, school, occupation, marriage and friends are products of rational decision process. For them, selection of living in a wealthier neighborhood is as rational as the selection of establishing associations with criminals (Becker and Murphy, 2000:23). In the selection, individuals are greatly influenced by social environment in which they lived. Including family, in every social cluster, individuals are under the influence of spillover effect of social capital.

Furthermore, Berger and Murphy (2000) also underline the importance of informal social control maintained by social capital. As a result, better families, neighborhood and occupation will provide better opportunities to its members. Contrarily, neighborhoods with lower social capital will produce unpleasant living environment (Becker and Murphy, 2000:48). In fact, each selection process contributes to different types of

social capital and determines the future choices of next generations as well.

As noted in discussion above, Bourdieu (1985), Coleman (1988) and Becker (2000) conclude that social capital exists in the relationships among individuals, organizations as well as between individuals and organizations. The function of social capital within these networks is to create a utility for participating actors. In contrast to this approach, Putnam (1993) defines social capital as social networks, social trust, and social norms as general features of social organizations. He also shares that social capital facilitates action and cooperation for mutual benefits of all related parties. For him, social capital enhances the investment into both physical and human capital (Putnam, 1993:35-36).

Moreover, in "Bowling Alone", Putnam (2000) uses social capital for all types of community efforts, and proposes multidimensional nature of social capital in the explanation of social problems. According to Putnam, two main types of social capital are of great importance: trust and social participation. In that, trust functions as a binding mechanism among social order mechanisms in the community. Putnam (2000) makes a division in the types of social participation such as political (party membership, voting, participation to rallies and riots), civic (associational membership, clubs), religious (church attendance or membership) and other informal social ties. Putnam (2000) stresses that decline in social capital will result in the emergence of crime or any increase in the crime rates. He directly relates crimes rates to inadequacy of social capital. Putnam (2000) concludes that social networks, as the basis of social capital, strengthen the communal ties, and sustains social order (Putnam, 2000:308-318).

1. Social Capital and Crime Rates

Social capital has received considerable attention in many social studies. Researchers have widely used and analyzed various indicators of social capital in relation to the explanation of social problems in extant literature (Lochner et al., 1999; Rosenfeld et al., 2001; Messner et al., 2004; Saegert, 2004; Beyerlein and Hipp, 2005; Buonanno et al., 2006; Akcomak and Weel, 2008).

In *Bowling Alone*, Putnam (2000) relates rising level of crimes in the United States to declining levels of social capital. In this work, Putnam (2000) conceptualizes social capital with social trust, informal sociability, volunteerism, political and civic engagement and finds that higher levels of social capital explain lower levels of crime in the U.S. communities (Putnam, 2000:308-9). Similarly, Rosenfeld et al. (2001) use electoral participation and organizational membership rates as a measurement of social trust and investigate the relationship between social trust and homicide in 99 geographical areas of the U.S. Rosenfeld et al. (2001) find that civic engagement and social trust have a decreasing effect on crime rates. According to this finding, social capital strengthens formal and informal social control in the community. In accordance with this, the researchers state that social capital exposes significant and negative effect on homicide rates (Rosenfeld et al., 2001:300).

Lederman et al. (2002) use common indicators of social capital, such as social trust and voluntary participation in community organizations in order to examine effect of social capital on violent crimes in 39 countries between 1980 and 1994. As a result, the researchers find that higher levels of social trust among community members are related to lower levels of violent crimes (Lederman et al., 2002:509).Similarly, Akcomak and Weel (2008) analyze the heterogeneity of crimes across municipalities in Netherlands by employing a set of social capital indicators (such as voting rates, social trust, blood donations, and charity). They find a link between crime rates and social capital. Municipalities with higher levels of social capital experience lower rates of crime in Netherlands (Akcomak and Weel, 2008:16).

Galea et al. (2002) use cross-sectional data in order to analyze the relationship between different measures of social capital and homicide rates between 1974 and 1993 in the United States. Among other social capital indicators, measures of perceived trust were strongly inversely associated with homicide rates within each period of time. However, the relationship between social capital and homicide rates over time is dynamic but not linear (Galea et al., 2002:1373). Buonanno et al. (2006) operationalize social capital in Italy with referenda turnout, recreational associations, voluntary associations and blood donation (Buonanno et al., 2006:3). The researchers use referenda turnout and blood donations as safe proxies of social capital. Their findings show that social capital is not related with robberies, but it is significantly and positively related to thefts. In addition, social capital is negatively and significantly correlated with car thefts (Buonanno et al., 2006:10).

In another study, Messner et al. (2004) use multiple dimensions of social capital (social trust and social activism) and model the relationship between homicide rates and social capital for 40 geographical areas in the United States. The researchers find out that social capital measures are significantly related to homicide rates alongside a net of other influences. It is also widely observed that social trust has a negative impact on homicide rates (Messner et al., 2004:897). With a similar approach, Chamlin and Cochran (1997) use the number of charity donations as an indicator of social capital. The researchers find that social altruism in the form of charity donations has a negative and significant impact on both property and violent crimes in US. provinces (Chamlin and Cochran, 1997:220).

Based on extant literature, this study employs available macro-level indicators of social capital across the provinces in Turkey and measures social capital with political participation, faith-based engagement and associational membership. Finally, this paper investigates explanatory power of social capital approach in understanding of property crimes in Turkey and tests the following hypotheses: (1) Associational membership is negatively related to property crimes. (2) Political participation is negatively related to property crimes. (3) Faith-based engagement is negatively associated with property crimes. (4)Young male population is positively related to property crimes. (5) Unemployment is positively associated with property crimes. (6) GDP per capita is positively related to property crimes. (7) Urbanization positively predicts property crimes.

2. Data and Methods

2.1. Data and Data Collection

The impact of social capital on property crimes across provinces in Turkey was analyzed with provincial level data. The number of cases in this study was 81, which is the number of provinces in Turkey. This study used official data recorded by Turkish National Police (TNP) and collected from public agencies by Turkish Statistical Institute (TSI). Accordingly, the number of property crimes was provided by TNP. Population density, unemployment rate, the number of young males aged 15-29, GDP per capita and voting rates were all obtained from the Turkish Statistical Institute. Exceptionally, the number of mosques was taken from Presidency of Religious Affairs, and the number of association members was obtained from Ministry of Interior. In order to

keep the logical and chronological order in the analysis, predictor variables were taken from Census 2000 data on TSI website, which was also most available official data.

2.2. Measurement of Variables

2.2.1. Property Crimes

Property crime was the dependent variable of the study. Property crimes were the total number of crimes recorded by Turkish National Police. The total number of arson, larceny-theft, burglary and motor vehicle theft measured property crimes. The categorization of property crimes were done in accordance with that of FBI's uniform crime reports. This also enables us to compare this study with the other studies following a similar methodology.

It is quite common in ecological studies on crime that crime measures are averaged in order to minimize fluctuations over the years (Beyerlein and Hipp, 2005:1008). Therefore, the average number of crimes for 2005 and 2006 was used and rates for property crime types per 1000 inhabitants at the provincial level were calculated.

2.2.2. Social Capital

Social capital is accepted as a composite function of individual and community level elements such as civic participation, altruism and social trust and so forth (Akcomak and Weel, 2008:4). In measuring levels of social capital in different societies, researchers have used different indicators such as social trust, the level of civic engagement and political participation, religious institutions and religious affiliation in communities (Putnam, 2000; Rosenfeld et al., 2001; Hudson and Chapman, 2002; Buonanno et al., 2006; Rose, 2000; Beyerlein and Hipp, 2005; Basibuyuk, 2008; Guclu, 2010; Kose, 2010).

Similarly, in this study, social capital variables were selected in line with extant social capital literature. In this vein, associational membership, faith-based engagement and political participation were selected to measure social capital in 2004 in Turkey. The number of associational members measured associational involvement in Turkey. Associational membership rate were calculated as follows: (The number of associational members per province/ Provincial Population 2000)/ 1000.

The number of mosques in all provinces was taken as a proxy for faith-based engagement. In that, the fact that majority of mosques are built with the support of local communities in all provinces shows to what extent members of a local community are engaged to each other on the basis of faith. Faith-based engagement rate were calculated as follows: (The number of mosques per province/ Provincial Population 2000)/ 1000.

Finally, political participation was measured with voting rates. Voting rates for each province were electoral turnouts in local elections in 2004.

2.2.3. Control Variables

This study included socioeconomic and demographic variables that might be related to crime rates in Turkey. Controlling for these variables, it was analyzed whether social capital measures might exert any significant effects on crime rates. Therefore, population density, unemployment rate, the number of young males aged 15-29 and GDP per capita were used as control variables.

In the study, unemployment rate and GDP per capita were selected as two prominent economic indicators that might affect crime rates. The unemployment rate was the total rate of unemployment at the provincial level recorded in Census 2000. Gross Domestic Product (GDP) per capita was a proxy for general level of wealth for each province in 2001, and was in US dollars.

Two standard demographic variables were included in this study. First, population density in 2000 was used for a proxy measure of urbanization. It was the number of individuals per square km. Secondly, young male population was the percentage of male population between 15-29 ages recorded with Census 2000.

3. Analysis and Findings

Descriptive statistics displayed in Table 1 indicates that there was a significant variation across provinces in Turkey based on variables in the analysis.

Table 1: Descriptive Statistics (N=81)

Variables	Minimum	Maximum	Mean	Std. Deviation
Property Crime Rate (Average of 2005-2006)	0.22	8.49	1.84	1.66
Associational Membership Rate	4.79	191.44	52.22	39.53
Faith-based Engagement Rate	0.28	6.51	1.63	0.96
Political Participation Rate (%)	61.1	86.8	74.76	6.44
% of young males aged between 15-29	10.58	28.06	14.87	2.22
GDP per capita ($)	568	6165	1768.94	912.64
Population Density (# of inhabitants per km^2)	13	1928	104.79	213.75
Unemployment Rate	3.6	17.4	7.85	3.11

Property crime rates per 1000 inhabitants varied between 0.22 and 8.49 across the provinces in Turkey in 2005 and 2006. Social capital variables also showed that differing levels of social capital was observed across the provinces in Turkey (associational membership rate ranging from 4.79 to 191.44; faith-based engagement rate ranging from 0.28 to 6.51; political participation rate ranging from 61.1% to 86.8%).

Similarly, provinces displayed different levels of socioeconomic development, and they were significantly different from each other in terms of GDP per capita in 2001 as well as unemployment rates in 2000. The province with highest GDP (6165$) was twelve times richer than the province with the lowest GDP (568$). Unemployment rate was also spectacularly ranged from 3.6% to 17.4% among the provinces in Turkey in 2000. Additionally, demographic variables (percentage of young males and population density) also showed that there was a wide range of variation among provinces in Turkey.

Table 2 shows the results of bivariate correlations between property crime rate, social capital (associational membership rate, faith-based engagement rate and political participation rate) and control (population density, unemployment rate, the number of young males aged 15-29 and GDP per capita) variables.

Table 2: Bivariate Correlations

	1	2	3	4	5	6	7	8
1. Property Crime Rate	1							
2. Associational Membership Rate	.523**	1						
3. Faith-based Engagement Rate	-.490**	-.009	1					
4. Political Participation Rate	.157	.331**	.114	1				
5. % of Young Males (between 15-29)	-.091	-.154	-.432**	-.285**	1			
6. GDP per capita ($)	.617**	.715**	-.202*	.367**	-.052	1		
7. Urbanization	.514**	.494**	-.417**	-.051	-.097	.404**	1	
8. Unemployment Rate	.105	-.163	-.418**	-.542**	.252*	-.181	.318**	1

*** Correlation is significant at the 0.01 level (1-tailed).
** Correlation is significant at the 0.05 level (1-tailed).
* Correlation is significant at the 0.10 level (1-tailed).

Bivariate analysis results indicated that research hypotheses were partially supported. Not all social capital variables supported the research hypotheses. Associational membership and political participation were not related to property crime rates as hypothesized. Moreover, in accordance with the hypothesis, faith-based engagement was significantly correlated with property crime rates (r= -.49, p<0.05). As to control variables, urbanization was significantly and positively associated with property crimes. However, GDP per capita, young males and unemployment were not related to property crimes. Despite the fact that not all variables were related to property crimes as expected, all of them included for the multivariate analysis in line with previous literature (Akcomak and Weel, 2008; Buonanno et. al., 2006).

In addition to the initial analysis of relationships between property crimes and all other variables, bivariate analysis also showed that there was no multicollinearity problem among independent variables (social capital indicators and control variables) as correlation coefficients (Pearson's r) for these variables ranged from -.05 to .71. These values were also consistent with thresholds defined in previous literature.

The estimates of OLS regression models predicting property crimes in all provinces of Turkey in 2005 and 2006 were shown in Table 3. Three multivariate regression models separately examined the effects of social capital and control variables on property crime rates.

Property crimes were regressed on social capital variables in Model 1. Model 1 estimated the effects of different measures of social capital on property crime rates. Results presented in Model 1 supported only one of

the proposed hypotheses. Faith-based engagement had a significant negative effect on property crime rates. As expected, in the provinces where faith-based engagement was higher, property crime rates were lower. Remaining two hypotheses regarding the impact of associational membership and political participation on property crime rates were rejected by the results in Model 1. Contrary to the hypotheses, associational membership positively predicted property crimes, and there was no significant relationship between political participation and property crime rates.

In Model 2, property crimes were regressed on control variables, and only two hypotheses were supported with the results of this part of regression analysis. Urbanization (population density) was a significant predictor of property crime rates. As hypothesized, provinces with higher population density had higher levels of property crimes. Unemployment was also significantly related to property crime rates. However, GDP per capita did not predict property crime rates; direction of the relationship was not as hypothesized. Similarly, percentage of young males had also non-significant relationship with property crime rates.

In Model 3, both social capital and control variables were included in the analysis in order to understand the real effects of social capital on property crimes controlling for young male population, GDP per capita, urbanization and unemployment. In this model, controlling for socioeconomic and demographic variables, associational membership and political participation did not exert expected impact on property rates as hypothesized. Faith-based engagement significantly predicted property rates in the last model. It was the only significant predictor of property crime rates in accordance with the hypothesis. Any meaningful relationship was not found between crime rates and all other variables in the final model.

Controlling for socioeconomic and demographic variables in Model 3, it was found that faith-based engagement sustained its effect on crime rates in different models; however, the direction and significance of the relationship between other social capital variables (associational membership and political participation) and crime rates did not improve. Oppositely, size of effects of these variables decreased in the full model (Model 3) including control variables.

As a part of multivariate analysis, multicollinearity and multivariate outliers were also checked for consistency of the results in regression models. The influence of multicollinearity on the results was also

observed with Variance Inflation Factor (VIF) values in three regression models. In this study, cut-off point was taken as 4.0, as any VIF value larger than 4.0 for an individual variable indicates that there is a multicollinearity problem among independent variables (Allison, 1999). According to this, multicollinearity among predictor variables did not seem to be a problem in this analysis. The largest VIF was 2.7 in all models.

Finally, multivariate outliers were detected in each regression models with Mahalanobis distance Di values. The maximum Mahalanobis distance Di (25.37) did not exceed the critical chi-squared value (df = 9, X¬2=27.88, p<.001) for all models. As a result, reliability of the regression analyses was also confirmed with these inspections.

Table 3: Estimates of OLS Regression Models Predicting Property Crime Rates in Turkey, Provinces, 2005-6

Predictor Variables	Model 1		Model 2		Model 3	
	b	β	b	β	b	β
(Constant)	.071 (.302)		-.276 (.265)		1.210** (.568)	
Social Capital						
Associational membership	(.001)	.503	-	-	.002** (.001)	.264
Faith-based engagement	-.224*** (.037)	-.491	-	-	-2.42*** (.047)	-.529
Political participation	.002 (.004)	.047	-	-	-.003 (.005)	-.060
Control Variables						
Young Males (between 15-29) (%)	-	-	-.16 (.18)	-.076	-.059*** (.018)	-.289
GDP per capita ($)	-	-	2.20E-4*** (3.96E-5)	.542	1.38E-4*** (4.55E-5)	.341
Urbanization	-	-	.002*** (.001)	.241	-1.16E-4 (.001)	-.017
Unemployment	-	-	.015** (.010)	.146	.003 (.010)	.034
Adjusted R²	.492		.453		.583	
F	26.856***		17.546***		16.994***	
N	81		81		81	

4. Discussion

This study analyzed the relationship between property crimes and social capital by using a provincial level data. More explicitly, this study attempted to explore the effect of social capital on property crimes in Turkey in 2005 and 2006 using a sample including 81 cases (all provinces in Turkey).

Operationally, the total number of arson, larceny-theft, burglary and motor vehicle theft measured property crimes. Associational involvement per 1000 people, faith-based engagement per 1000 people and political participation rates were selected as social capital measures.

Based on results of three OLS models, it was found that not all indicators of social capital predicted property crimes in hypothesized directions. Property crimes were significantly predicted by associational membership and faith-based engagement; however, political participation did not have any significant effect on these types of crimes. Contrary to hypotheses, associational membership and political participation were not related to crime rates in this study. Even though socioeconomic and demographic variables were included into the analysis as control variables, the effect of two variables (associational membership and political participation) did not change in final models. Surprisingly, this finding was also consistent with previous literature (Buonanno, Montolio and Vanin, 2006). Buonanno, Montolio and Vanin explains this finding on the basis of the fact that provinces with higher levels of social capital would report crimes more than other provinces with lower levels of social capital(Buonanno et al., 2006:9).

As expected, faith-based engagement significantly and negatively predicted crime rates in basic, and in final model with the control variables. More clearly, provinces with higher levels of faith-based engagement were more likely to have lower crime rates. Similarly, Beyerlein and Hipp (2005) found that bridging aspect of religious institutions reduces the risk of crime in communities (Beyerlein and Hipp, 2005:1002). Rose (2000) furthers that religious institutions creates linkages among individuals through religious and secular activities, and this increases community interaction and enhances the ability of community to cope with crime incidences locally (Rose, 2000:343-344).

Conclusion

The findings of this study showed us that selected measures of social capital partially explained crime rates across all provinces in Turkey in 2005-2006. Among other social capital measures, faith-based engagement was the only independent predictor of crime rates, controlling for a set of socioeconomic and demographic covariates.

Contrary to expectations, this study found little evidence that selected measures of social capital were related to crime rates at the provincial level in Turkey. This contradiction showed us the difficulty of operationalization of social capital as well as necessity of finding different measures or changing unit of analysis for further research. Most significant limitation of this study was that it did not cover all aspects of social capital. Indicators such as social trust or social ties might be selected as proxies of social capital in the explanation of crimes in further research.

The number of cases appeared to be another important limitation. In that, it was thought that the number of cases (N=81) did effect significantly the results of statistical analysis. In order to increase the number of cases, a nationally representative survey can be conducted to have enough sample size.

In addition, the number of cases was related to nature of research design using a dataset belonging to all provinces in Turkey. Due to use of this type of dataset, it was also difficult to contend that social capital indicators were in a casual relationship with crime variables. This study only addressed linear relationships between predictor and dependent variables. In another words, it might be concluded that provinces with certain levels of associational engagement, political participation and faith-based engagement did have either higher or lower levels of crime rates. It might be misleading to finalize that social capital increased or decreased crime rates in provinces.

Finally, credibility of the official data may be another concern in this study (Polat, 2008; Polat and Gul, 2010). In line with previous studies, individual level data collected with social capital surveys may produce better results in the understanding of urban or rural crimes. Despite these limitations, the results of this study were still in consistent with empirical results of previous research (Rosenfeld et al., 2001; Messner et al., 2004; Saegert, 2004; Beyerlein and Hipp, 2005; Buonanno et al., 2006; Akcomak and Weel, 2008).

References

Akcomak, Semih and Weel, Bas Ter, (2008), *The Impact of Social Capital on Crime: Evidence from the Netherlands*, IZA Discussion Paper No. 3603, (Retrieved November, 9, 2010 from http://ssrn.com/abstract=1214909 or doi:10.1111/j.0042-7092.2007.00700.x).

Allison, Paul, (1999), *Multiple Regression: A primer*, Thousand Oaks, CA: Sage.

Basibuyuk, Oguzhan, (2008), *Social (dis)organization and terror related crimes in Turkey*, Doctoral dissertation, University of North Texas, Denton, TX.

Becker, Gary, S., (1962), "Investment in human capital: A theoretical analysis", *The Journal of Political Economy*, C.70, S.5, ss.9-49.

Becker, Gary, S., and Murphy, Kevin, M., (2000), *Social economics: Market behavior in a social environment*, Harvard University Press. England.

Beyerlein, Kraig and Hipp, John. R., (2005), "Social capital, too much of a good thing? American religious traditions and community crime", *Social Forces*, C.84, S.2, ss.995-1013.

Buonanno, Paolo Montolio, Daniel and Vanin, Paolo, (2006), "Does Social Capital Reduce Crime?",*Working Papers 0605*, University of Bergamo, Department of Economics, (Retrieved October, 9, 2009 from http://www.decon.unipd.it/assets/pdf/wp/20060029.pdf).

Chamlin, Mitchell, B. and Cochran, John, K., (1997), "Social altruism and crime", *Criminology*, C.35, S.2, ss.203-228.

Coleman, James, S., (1988), "Social capital in the creation of human capital", *American Journal of Sociology*, C.94, S.1, ss.95-120.

Hudson, Lisa and Chapman, Chris, (2002), "The Measurement of Social Capital in the United States", International Conference on the Measurement of Social Capital London, England.

Galea, Sandra; Karpati, Adam and Kennedy, Bruce, (2002), "Social capital and violence in the United States, 1974-1993", *Social Science & Medicine*, S.55, S.8, ss.1373-1383.

Guclu, Idris, (2010), *The function of social structure in controlling violent crime in Turkey*, Doctoral dissertation, University of North Texas, Denton, TX.

Irmak, Fatih, (2011), *Can Social Disorganization and Social Capital Factors Help Explain the Incidences of Property Crimes In Turkey?*, Doctoral dissertation, University of North Texas, Denton, TX.

Kose, Yasin, (2010), *Social (dis)organization and organized crime in Turkey*, Doctoral dissertation, University of Texas at Dallas, TX.

Lochner, Kim; Kawachi, Ichiro and Kennedy, Bruce, P., (1999), "Social capital: a guide to Its measurement", *Health and Place*, S.5, ss.259-270.

Lederman, Daniel; Loayza, Norman and Menéndez, Ana Maria, (2002), "Violent Crime: Does Social Capital Matter?", *Economic Development and Cultural Change*, S.50, ss.509-539.

Messner, Steven, F.; Rosenfeld, Richard and Baumer, Eric, P., (2004), "Dimensions of social capital and rates of criminal homicide", *American Sociological Review*, C.69, S.6, s.882.

Polat, Ahmet, (2008), "Suç İstatistiklerine İlişkin Sorunlar ve Öneriler", *Polis Bilimleri Dergisi*, C.10, S.1, ss.37-61.

Polat, Ahmet ve Gul, Serdar Kenan (2010), *Suçun Ölçümü*, Ankara: Adalet Yayınevi.

Portes, Alejandro, (1998), "Social capital: Its origins and applications in modern sociology", *Annual Review of Sociology*, C.24, S.1.

Putnam, Robert, D, (1993), "The prosperous community: Social capital and public life", *American Prospect*, C.13, S.4, ss.35-42.

Putnam, Robert, D, (2000), *Bowling Alone: The Collapse and Revival of American Community*, New York: Simon & Schuster.

Rose, Dina, R, (2000), "Social disorganization and parochial control: Religious institutions and their communities", *Sociological Forum*, C.15, S.2, ss.339-358.

Rosenfeld, Richard; Messner Steven, F. and Baumer Eric, P., (2001), "Social capital and homicide", *Social Forces*, C. 80, S.1,ss.283-309.

Saegert, Susan and Winkel, Gary, (2004), "Crime, social capital, and community participation", *American Journal of Community Psychology*, C.34, S.3,ss.219-233.