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ABSTRACT

A QUANTITATIVE ANALYSIS OF THE GROWING BUSINESS OF ORGANIZED CRIME: STRUCTURAL PREDICTORS OF CROSS-NATIONAL DISTRIBUTION OF HUMAN TRAFFICKING MARKETS AND TRAFFICKING IN WOMEN IN TURKEY.

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Current knowledge on human trafficking is mainly produced through the review of official cases and statistics and interviews with former victims and key informants in a single country or a number of countries in a single region. Therefore, structural forces driving human trafficking are simply inferred based on the individual (compositional) characteristics of the victims and on the descriptive information about limited number of countries where those individuals are recruited and/or exploited. This study attempted to fill this void by exploring the spatial distribution of human trafficking markets across the world nations as well as within one particular country, Turkey. In this regard, three major research questions have laid the foundation for overall discussion in this study.

First, the impact of certain macro structural factors on the distribution of human trafficking markets across a sample of 53 countries is examined to understand cross-national distribution of human trafficking markets. Acknowledging that human trafficking is generally nested in larger migratory processes, cross-national distribution of human trafficking is investigated based on the assumptions of migration systems theory, which mainly explains the initiation and direction of migration and the role of traffickers as intermediary institutions in broader migration processes. Migration systems theory is complemented with theoretical propositions drawn from the social disorganization framework within criminology. Several sets of Ordinary Least Squares and Ordinal Logit

Regression Models indicated that poverty, urbanization, and the size of total population have significant positive impact whereas the proportion of younger population has significant negative impact on human trafficking in a country.

Second, Rengert's (1996) framework for the diffusion of illegal drug markets is utilized to explore the distribution of human trafficking markets across 81 cities in Turkey. Several sets of Negative Binomial Regression (NBR) models revealed that hierarchical diffusion and social disorganization have significant impact on diffusion of trafficking in women across 81 provinces in Turkey. Specifically, the cities with international borders, larger population, more poverty, heterogeneity, residential mobility, and family disruption were found to have higher number of human trafficking incidents and calls for rescue as reported by law enforcement officials and the International Organization for Migration (IOM) office in Turkey respectively.

Third and the final analysis considered the extent to which human trafficking, illegal prostitution, and other forms of violent and property crime as well as organized crime are associated at the city level. Related NBR models demonstrated that migrant prostitution has significant positive impact on human trafficking incidents, calls for rescue, total crime rates, and organized crime rates in the following years even when the impact of hierarchical diffusion and social disorganization are held constant.

Overall, while globalization impacts the cross-national distribution of human trafficking through its differential impact on structural characteristics (i.e. poverty and urbanization) of the world nations, distribution of human trafficking markets in Turkey is mainly driven by the demand for the illegal services of trafficking markets which thrives upon existing social disorganization and disorder in a given community.

Dedicated to my mother, my sister, my wife, my daughters, and to the memory of my father.

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CHAPTER ONE

INTRODUCTION

1. Statement of the Problem

Despite growing concern about human trafficking within the last decade, empirical research on human trafficking is still in its early stages (Adepoju, 2005; Ali, 2005; Bruckert and Parent, 2002; Calandruccio, 2005; Godziak and Collett, 2005; Langberg, 2005; Lee, 2005; Piper, 2005). Existing research mostly estimates the scale of the problem, maps routes and countries of origin, transit, and destinations; or reviews legal frameworks and policy responses. As such, legal regulations and intervention policies based on such limited research and information may create unintended side effects (Salt, 2000).

Human trafficking cuts across a wide array of concerns at national, international, and global level ranging from poverty, population growth, ethnic and gender stratification, human rights abuses, to transnational crime. Hence, it is not surprising to see that human trafficking is being approached in several ways such as a moral issue, a gender issue, a human rights problem, a public order problem, a labor question, a migration issue, and a matter of organized crime (Bales, 2005; Barry, 1984; Kwong, 2001; Okereke, 2005; Shelley, 2003). In addition to its impact on the victims, those who are simply treated as commodities and imported, exported, and exploited by individuals or transnational organized crime groups; human trafficking is also believed to affect origin, transit, and destination countries and pose a significant threat to their international relations, economy, and security because of the involvement of organized crime (Salt, 2000).

Human trafficking is believed to be the fastest growing business of organized crime. Specifically, trafficking in women for the purposes of sexual exploitation is claimed to be one of the most prolific areas of international criminal activity (Miko, 2004). According to the U.S. Federal Bureau of Investigation, human trafficking produces an estimated $9.5 billion of (illegal) revenue annually (US Department of State, 2005) whereas the value of the global trade in the market of trafficking in women for the purposes of sexual exploitation is estimated to be between $7 and 12 billion (Hughes, 2001; Tomasi , 2000).

Although the sex industry is claimed to be profitable for the local economy as it generates needs for secondary services and inputs ranging from food and clothing to condoms and health services, huge amount of profits generated out of that illicit market are rarely invested in the countries of origin; in contrast, they are transferred out of the country and laundered into western economies (Hughes, 2001). Moreover, the profits from that criminal transportation of human beings fuel other criminal activities since human trafficking and organized crime is mostly connected with money laundering, drug trafficking, document forgery, and human smuggling (US Department of State, 2005). Yet, given the clandestine nature of the activities of smuggling and trafficking, it is not possible to measure the magnitude of the problem with a certain level of accuracy.

Between 600,000 and 800,000 women, men, and children are estimated to be trafficked across international borders each year. Moreover, women and girls, half of whom are minors, constitute 80% of those trafficked persons (US Department of state, 2005). The United Nations, on the other hand, placed the number of men, women, and girls trafficked across the international borders at 700,000 to 4 million in 2000. Recently,

more than 27 million people are estimated to have been trafficked and exploited worldwide (Bales, 2005). Forms of exploitation mainly include slavery, forced labor or services, prostitution, and servitude (Granville, 2004). In fact, trafficking in women can not be limited to exploitation within the sex industry since it might also include other forms of exploitations such as bonded labor, domestic service and even involuntary organ transplants (Kelly, 2002). However, following the collapse of Soviet Union, the international community had to pay more attention to the trafficking in women for the purposes of sexual exploitation as thousands of Russian and Ukrainian women were trafficked into sexual exploitation across the globe.

Even though trafficking in women for sexual exploitation was not a new phenomenon, the chaos in Russia was an important catalysis for human trafficking to spread to new parts of the world and become a larger part of the illicit economy (Stoecker and Shelley, 2005).Until the end of the 1980s, primarily the Asian women from Thailand and Philippines were subject to human trafficking (Stoecker and Shelley, 2005). However, with the collapse of the USSR, the former Soviet republics have become the major countries of origin of the women trafficked into the sex industries across the globe (Hughes, 2002). Basically, the process of post-Soviet socio-economic transition to market economies was particularly traumatic for women. That is to say, females were at an extremely precarious position since they were deprived of their jobs and were also suffering from a collapsed welfare system (Haynes, 2004; Stoecker and Shelley, 2005). Thus, trafficking in human beings for sexual and labor exploitation in Europe has been driven mainly by the collapse of the Soviet Union in the late 1980s (IOM, 2002). Additionally, the conflicts in the former Yugoslavia was also another factor that

contributed to the same process since the Albanian mafia was used to abduct or lure young women to Italy and other parts of the Europe and force them to work in brothels until the arrival of peace keeping missions in Kosovo (Aronowitz, 2001).

Currently, Russian women are known to have been involved in prostitution in over 50 countries as a result of trafficking (Hughes, 2001). In general, 90 percent of trafficking victims in the E.U. claimed to be originating from Central and Eastern European countries (Mameli, 2002) and they are commonly trafficked to North America, Western Europe, and Japan (Kara, 2002; O'Neill, 1999). According to a report from the United Nations Center for International Crime Prevention, Germany is the top destination of the women trafficked from Russia, and the United States is the second top destination whereas Cyprus and Turkey are emerging as further European destination and transit countries (Hughes, 2002). According to same report, besides Russia, other main countries of origin for the trafficked women are Ukraine, Thailand, Nigeria, Moldova, Romania, Albania, China, Belarus, and Bulgaria (Mizus, Moody, Privado and Dougla, 2003).

In terms of trafficking in women, Turkey is among the most affected countries mainly because of its geographic location bordering and bridging the countries of origin and destination in the region. The women from the former Soviet Union initially are known to have engaged in small economic enterprise by selling clothes, which is called the "suitcase trade" in Turkey following the demise of the Soviet regime (Williams and Balaz, 2002; Yukseker, 2004). However, as soon as those women lost their purchasing power and started to involve in lucrative tourism and entertainment business, there has been significant evidence that they have been trafficked and recruited into forced prostitution in Turkey. There were 469 people identified in Turkey as victims of human

trafficking in 2005 all of whom were females and from the former Soviet Union except for 11 women from Romania and only one woman from Uganda (IOM, 2006). Yet, research on those women trafficked into Turkey from the former Soviet Union is still sparse (IOM, 2001).

Two different yet overlapping models have been applied to the study of human trafficking so far. Relying on an economic approach, the first model emphasizes trafficking as a business within broader international migration process while the second approach takes a legalistic view by considering the trafficking as a criminal activity. For the former one, Salt and Stein (1997) provided a hypothetical model that presents trafficking networks as intermediary systems in the global migration, which facilitate the movement of people between origin and destination countries. However, they do not make a clear distinction between smuggling and trafficking and this is the main drawback of their model as reflected in the case studies of human trafficking in Poland (Okolski, 2000), Hungary (Juhász, 2000), and Ukraine (Klinchenko, 2000).

The latter approach assumes the involvement of (organized) criminal networks as traffickers in human trafficking by recruiting, transporting, or exploiting trafficked persons. Yet, there is an ongoing debate regarding the nature, structure and the role of such organized criminal networks within human trafficking (Bruinsma and Bernansko, 2004; Finckenauer, 2001), which simply seems to be reverberation of the disagreement on the definition of organized crime (organized: Schelling, 1971 vs. disorganized crime: Reuter, 1983). Put another way, a homogeneous definition of organized crime networks or syndicates without emphasizing local, regional, and international variations doesn't

appear to be feasible (Allum & Sands, 2004; Levi, 1998; Mcillwain, 1999; Shelley, 2003; Zhang & Chin, 2002).

There is no doubt that the current international trade in human beings is perpetrated by the traffickers composed of individuals or gangs of individuals (Stoecker, 2000). It is always possible for an individual pimp to get a woman into another country for the purpose of prostitution. However, if a number of women are needed for a prostitution or trafficking operation, an organized way of transportation most likely to appear (Hughes, 2002). Moreover, even if trafficking starts with the involvement of a few pimps, when prostitution is widely tolerated (or legalized/regulated in some countries like Turkey), this initial process is most likely to attract and fuel the involvement of larger organized crime groups in that territory in the long run under the pretext of protection provided by that organized crime group. Thus, local small prostitution rings become connected to larger organized crime groups and while providing the local pimps with a future career in organized crime, this initial process also serves as an entrance point for organized crime into that city or country since trafficking in women is intertwined with other related criminal activities (O'Neill, 1999). In this regard, the size and the scope of trafficking can range from individual pimping and control of local women to loosely associated crime groups that focus on different aspects of trafficking process, as well as to major criminal syndicates with international connections for trafficking women to destination countries where they control the sex industry. And, when trafficking is perpetrated by a large number of loosely connected crime groups, this makes the detection and crackdown of a trafficking network relatively difficult because of the vague structure of involved groups.

Apparently, both approaches to human trafficking prioritized the role and structure of traffickers with limited attention to the illegal human trafficking market itself. However, while running their illegal business, traffickers, pimps, and recruiters generally thrive on the vulnerability of the people who suffer from economic desperation and disadvantage, lack of sustainable income, and poverty (Raymond and Hughes, 2001; US Department of State, 2005). Many of the women subject to trafficking are those with poor job skills and almost no chance of employment in their country of origin (Aronowitz, 2001). However, "researchers have glossed over or completely ignored the broader socio-cultural and economic contexts in which migration, in general, and more strictly trafficking in human beings, takes place" (Adepoju, 2005, 84).

Moreover, people get involved in this international illicit trade to satisfy the demand of the bosses of illegal labor and the clients of sexual and other services (provided by the migrants), but not the demand of the trafficker or smuggler (Okereke, 2005). In other words, human trafficking is driven by sexual industry and the growing demand for exploitable labor (US Department of State, 2005). Unfortunately, as indicated by Hughes (2001), little or no attention is paid to the legitimacy of demand, though the traffickers and smugglers have simply taken the advantage of that demand (Okereke, 2005).

Ironically, unless the underlying contextual factors that lead to convergence of traffickers and victims of trafficking in the countries of origin and destination are identified, the research focus merely on traffickers and victims can have only limited impact as the contextual factors that contribute to recruitment, transportation, and exploitation of the victims by the traffickers are left untouched. More dramatically, such

a limited approach puts the trafficked persons in a vicious cycle of exploitation. The victims of human trafficking are found to be re-victimized when they are returned to the context in which they were initially victimized (Oxman-Martinez, Hanley, and Gomez, 2005).

Current knowledge on human trafficking is mainly produced through the review of official cases and statistics and interviews with former victims and key informants in a single country or a number of countries in a single region. Therefore, structural forces driving human trafficking are simply inferred based on the individual (compositional) characteristics of the victims and on the descriptive information about limited number of countries where those individuals are recruited and/or exploited. A representative sample of world nations has never been subject to scientific inquiry to identify structural correlates of human trafficking with only one exception. That is, Bales (2005, 139) used multiple regression analysis to identify structural correlates of human trafficking in a sample of 111 different countries. Creating two different measures of human trafficking as 'trafficking from' and 'trafficking to' a country, Bales found that human trafficking flows from poor countries suffering from instability and corruption to relatively more prosperous and stable nations.

However, the UN (2000) definition of human trafficking does not make a distinction between human trafficking from, to, and in countries and all are embedded in a single definition of human trafficking. Recent evidence also demonstrates that classification of the countries solely as 'sending' and 'receiving' points is quite difficult because several countries can simultaneously be sending, receiving, and transit points in the process of human trafficking. Put differently, developing countries are likely to serve

as both sending and receiving points for different countries in different regions. Relative prosperity of a country might also be different in a regional and cross-national context. Finally, this dual conceptualization of human trafficking at such a broader level of analysis also ignores human trafficking which takes place within the borders of each country.

In this case, while an ideal measure of human trafficking should include at least three major components of human trafficking, that is, human trafficking 'from', 'to', and 'in' a country; the geographic distribution of human trafficking calls for further investigation as the simple push and the pull factors offered by neoclassical approach to international migration is not capable of explaining distribution of human trafficking because of its dual (as 'from' and 'to') focus on human trafficking in space. Building on existing research on human trafficking and drawing insights from theoretical frameworks used to explain international migration, communities and crime, illegal drug markets, and (migrant) prostitution; this study attempts to fill this void by exploring the spatial distribution of human trafficking at two different levels of analysis. Acknowledging that human trafficking is generally nested in larger international migration processes, the cross-national distribution of human trafficking is going to be investigated based on the assumptions of migration systems theory as regard to the initiation and direction of trafficking and the role of traffickers as intermediary institutions in trafficking process. Then, Rengert's (1996) conceptualization of illegal drug markets will be utilized to explore the geography of human trafficking markets across 81 cities in Turkey. Overall, globalization is surmised to impact the global distribution of human trafficking through its differential impact on structural features of world nations while the distribution of

human trafficking markets in Turkey is more likely to be driven by the demand for the illegal services of trafficking markets which thrive upon existing social disorganization and disorder in a given community.

2. Significance of the Study

This study departs from conventional approaches to human trafficking in several ways. First, national and regional level studies on human trafficking has largely drawn upon individual level correlates of human trafficking to come up with contextual explanations as regard to the distribution of human trafficking across the globe. Thus, available information about trafficking markets has generally been limited to accounts of identified victims of trafficking and to those who provide social and legal support to these victims. Therefore, in addition to the lack of contextual analysis on human trafficking, present knowledge based on individual level data might also be biased as it builds mainly on individual case studies of assisted victims who might not necessarily represent the entire population of trafficked victims even in the country where they are exploited and recruited. Hence, investigating the geographic distribution of human trafficking markets at the international and national level, this study provides the first contextual analysis of human trafficking which is conceptualized as a process that involves both human trafficking from and to a country as defined by the United Nations.

Second, even though a significant number of studies on trafficking in women has been devoted to the investigation of causal factors in sending countries over the past decade (Hughes, 2004), few studies have focused on the importance of demand and on the places where exploitation of the victims takes place (Ali, 2005; Hughes, 2001). Exploration of trafficking in women for the purposes of sexual exploitation in Turkey,

thus, contributes to efforts aimed at understanding the role of demand for the services of traffickers on the distribution of trafficking markets.

Third, through its interdisciplinary approach that borrows from the fields of international migration, geography, criminology and criminal justice, the current study is expected to contribute to all as it incorporates various concepts from these fields into the study of human trafficking as an understudied topic across these different disciplines. More specifically, successful application of these multidisciplinary frameworks to the analysis of human trafficking across different countries with various cultural contexts will also contribute to the theory as the power of a theory depends on the generalizability of its assumptions across different times, places, and populations.

As long as the spatial distribution of human trafficking markets across the nations and in Turkey helps to identify certain contextual factors that significantly contribute to human trafficking in a given country/community, the current study can also pave the way for further investigation of physical and social environment(s) that drive/facilitate the establishment and diffusion of human trafficking markets.

3. Organization of Dissertation

The plan of this dissertation is as follows. Chapter two provides an overview of the theoretical framework to be used in the course of this study. Chapter three reviews available empirical research on human trafficking in the light of proposed theoretical framework to identify previous studies that could lend evidence for the relevance of adapted framework and of the hypotheses to be specified in the following chapter. Chapter four specifies the hypotheses to be tested and the methodological design to be employed. The measurement of independent and dependent variables to be used in the

analysis are also identified and defended in this chapter. Chapter five presents analysis of the data and major research findings whereas the final chapter, chapter six, extends the discussion based on analyses and findings and concludes with implications of the dissertation for both policy and future research.

CHAPTER TWO

THEORETICAL FOUNDATION

1. Migration Systems Theory and Global Human Trafficking

Theories developed to understand the process of international migration process provide different causal mechanisms operating at very diverse levels of analysis to explain the initiation and persistence of migratory processes (Massey, Joaquin, Hugo, Kouaocui, Pellegrino, and Taylor, 1993). Although economic pressures are among the most influential factors instigating international migration, existence of economic disparities between countries or individuals alone doesn't always explain the specific composition and direction of migratory process (Tsuda, 1999). In addition to the economic motives of the immigrants, analyzing economic, historical, political, and ethnic linkages between sending and host countries (Fujita, 2004), migration systems theory mainly argues that migration is driven by pull and push factors specific to a particular historical - structural context (Yamanaka, 2000). Put another way, migration systems theory tries to integrate macro, micro, and meso assumptions of several other theories of international migration. Thus, providing a broader conceptual framework, migration systems theory expedites the analysis of the formation of specific migration systems (Kritz, Lin, and Zlotnik, 1992).

Migration systems theory suggests that the migratory process is driven by the existence of prior links between sending and receiving countries based on trade, investment, political influence, colonization or cultural ties (Castles and Miller, 2003, 26). Unlike the neoclassical approach that neglects historical causes of movements and ignores the role of the state, and in contrast to world systems approach that identifies the

interest of capital as all-determining and lacks attention to the individual motivations, migration system theory focuses on the interaction among macro, micro, and meso structures (Castles and Miller, 2003) and also puts the individual in the center of the migration process (Rosewarne, 2004). Therefore, the units of social analysis for which the framework could apply can range from the individual migrant to the world system (Lim, 1987, 418).

In general, ***Macro structures*** refer to large level institutional factors such as the political economy of the world market, interstate relationships, and the laws, structures and practices established by the states of sending and receiving countries to control migration settlement. ***Micro structures*** are mainly composed of information about the destination point and capabilities for organizing travel and finding work (cultural capital), and informal social networks developed by the immigrants themselves which include personal relationships, family and household patterns, friendship and community ties, and mutual help in economic and social matters. ***Intermediate or meso*** structures refer to individuals, groups, or institutions that simply benefit from the migration of others as individual or institutional entrepreneurs by mediating the process. Intermediaries can be legal or illegal and may include: labor and education recruiting organizations; private voluntary humanitarian, political or religious groups; travel and shipping agents; smugglers; providers of false documentation and other intermediaries (Castles and Miller, 2003, 27-28; Lim, 1987, 420).

According to Kritz et al. (1992, 6), even though the economic, politic structures and ties among the nation states define the system and the direction in which the migration flows are likely to occur, they do not explain why a subset of people migrates

or who is likely to become a migrant. In order to answer these questions, they say, we need to look at the individual and institutional networks that assist with the mobilization and recruitment of the migrants and organization of the migration. While most of such individual and institutional networks operate legally and facilitates migration by reducing the costs and risks (which also benefits them), there are other networks of extra-legal institutions or intermediaries which involve in the organization of the migration flows to take advantage of the migrants' vulnerability. Extra-legal networks include the smugglers and others who provide false documents to the migrants, and their clients expected to be from the groups of people who can not qualify or afford for the legal services of formal institutions (Kritz et al., 1992, 7).

Thus, individual or organized trafficking networks can also be conceptualized as extra-legal institutions under the scope of the migration systems theory, for such organizations also take the advantage of the vulnerability of the victims who might initially intend to leave the country for the same reasons as an immigrant. Given that the victims of human trafficking are also offered well-paid jobs at the beginning by the traffickers, they are likely to be motivated to migrate and/or accept the offers of the traffickers because of the same social, economic, and political conditions prevailing in their country of origin.

However, since human trafficking mainly involves the deception of victims, it departs from conventional definitions of international migration (Salt, 2000) and migrant smuggling. Unlike regular migration and migrant smuggling (in which the smugglers are paid by the immigrant to be transported to a certain destination), in human trafficking, the individual agency of a victim is almost irrelevant as the victims are simply lured,

recruited, and transported into the destinations where they are exploited. In other words, traffickers are capable of creating a new geography of international migration by determining the choice of victims' destination countries and routes (Salt and Stain, 1997, 474).

In this regard, placing human trafficking in broader international migratory process, migration system theory can provide a general framework for the analysis of cross-national distribution of human trafficking. Since the traffickers and vulnerable victims who cannot qualify or afford for international migration are assumed to converge in the process of international migration, certain contextual factors that stimulate the convergence of potential victims and human traffickers (in place) could impact the cross-national distribution of human trafficking as well. Even though such contextual factors are not specified by migration system theory, as the political economy of the world market and economic and trade relations between the world nations are proposed as important macro level factors that shape international migration flows, globalization and related transformations might contribute to an increase in human trafficking in developing countries.

As the nations become more connected to other countries through the spread of formal and informal economic relations in the process of globalization, rapid social change and displacements increase social disorganization (Howard, Newman, and Pridemore, 2000, 148) which in turn decreases the level of social control and creates more opportunities for crime (Bursik and Grasmick, 1993). Put differently, "social disorganization seems to be a mechanism through which globalization and economic development affect crime rates" (Paulsen and Robinson, 2004).

In his analysis of the geography of illegal drug markets, Rengert (1996) also emphasizes the role of community social disorganization and disorder on the establishment and diffusion of illegal drug markets in the United States. Given the fact that trafficking markets are not equally distributed across a single country; Rengert's (1996) two step diffusion model of illicit drug markets can be applied to examine the spatial distribution of human trafficking as another type of illicit market (Eck, 1995) in a given country.

2. Geography of Illicit (Drug) Markets in a Country: Two-Step Drug Diffusion Model

Rengert (1996) proposes a two-step diffusion model to examine the spatial processes that shape the distribution of illegal drug markets across different regions, states, counties, cities, and neighborhoods in the United States. Two types of distributors are defined as active agents of this diffusion process: First, organized criminals who market the drugs for personal profit and second, the users who obtain and may sometimes further distribute drugs for personal gratification. In general, spatial distribution and diffusion of the illegal drug market is driven by interdependent and reinforcing motivations of these two active agents of the market.

Specifically, for the first step of the model, the distribution of organized criminal activity in illegal drug sales is expected to conform to a hierarchical pattern of diffusion. In accordance with hierarchical diffusion theory, organized distribution and selling of illegal drugs originates in the largest cities and subsequently filter down through an ordered sequence of metropolitan centers of decreasing size in the urban system of the United States. The main assumption behind this top-down diffusion of illegal markets is

that relative profitability of cities is expected to differ as a function of city size. Simply put, because larger cities contain more potential customers than smaller urban centers, more populated larger centers are expected to be selected as targets of illicit drug markets and thus have widespread drug addiction earlier. Once the larger cities become saturated with illegal drug markets, subsequently, relatively smaller cities are expected to be chosen as new fertile markets.

The second step of the model, on the other hand, assumes a new pattern in the area surrounding an established illicit drug market in each urban center. That is, following hierarchical diffusion of illicit drug markets in accordance with the size of the urban centers in decreasing order, local or neighborhood expansion of the markets takes place in the region served by each center/city. In order to exploit the potential drug-consuming population in each metropolitan area, illegal drug distributors expand their activities outward from the central city into surrounding suburban areas in an expansion-contiguous/neighborhood diffusion process and distant-minimizing effects that largely shape the spatial patterns of drug distribution.

Thus, hierarchical and local diffusion of illegal markets are highly interdependent in that while the expansion of illicit drug markets into immediate hinterland in each city is driven by hierarchical diffusion, established central illicit markets survive on outward dispersion of their activities. In this regard, Rengert (1996) offers two main factors that impact the distribution of illicit drug markets in time and space: population and geographic proximity. That is, the dispersion of illicit drug markets in a given region/state/city/county mainly varies as a function of the size (population) of that region/state/city/county. In addition to the size, geographic proximity to established illicit

markets or to the places where the illicit commodities are produced/imported/originated also impacts the distribution of illicit markets.

In his analysis of the geography of illicit drug markets in the U.S., Rengert demonstrates the ability of this two-step diffusion model in explaining spatial distribution of illicit drug markets across different regions/states/cities/counties of the U.S. based on official law enforcement statistics. Congruent with the hierarchical diffusion principles, Rengert found that states that contain the nation's largest cities, that is, California, New York, Texas, and Florida experienced the highest number of drug law arrests in 1992. For the impact of geographic proximity (of a state to the initial center of the production and distribution of a specific type of drug), the results were also consistent with the assumptions of the diffusion model. Namely, regional distribution of drug law arrests exhibited different patterns for imported illicit drugs and marijuana which is produced in the U.S. Among four different regions of the U.S., the north central region, which does not contain a seacoast, experienced the lowest rate of imported illicit drugs of heroine and cocaine. In contrast, the north central region had the highest location quotient (p.45) for the arrests for sale and possession of marijuana, for this interior region is closest to where much of the marijuana is produced in the U.S.

Moreover, among a sample of 24 U.S. cities, three port cities, Philadelphia, Manhattan, and San Diego experienced the highest percentage of arrestees testing positive for any type of drug whereas inner cities such as Omaha and Phoenix had the lowest proportion of arrestees tested positive for any type of drugs. The hypothesized temporal order of the hierarchical diffusion model was also supported by the examination of the relative change in drug related arrests in the states of New York and Pennsylvania

at two different points in time. In both states, largest and smallest cities experienced the smallest increase whereas the intermediate-sized cities had the greatest increase in drug related arrests. This finding lends evidence for the main assumption of the hierarchical diffusion model that illegal drug distribution filters down through the urban hierarchy in the U.S. cities over time.

Rengert's analysis provided consistent findings for the expansion of the illicit markets in a region served by an established market as well (second step). The analysis of the illicit drug marketing in the Philadelphia region indicated that while the central city had the highest level of drug arrests because of the largest population and related hierarchical diffusion, suburban counties had lower rates of drug rates mostly in accord with their population size during the first period (1976-1978). However, as for the increase in the drug arrests in the following period (1986-1988), the counties closer to the central city experienced the highest proportion of change regardless of their population size.

Finally, in his analysis of the distribution of illegal drugs at the retail level, Rengert points to certain characteristics of the illicit markets quite different from the characteristics of the legal markets. Although the overall diffusion model implies a considerable level of similarity between legal and illegal markets in regard to the distribution/diffusion of their activities, the lack of legal protection within the illicit markets forces the market distributors to consider several other measures which in turn impact location preferences and thus spatial distribution of illicit markets accordingly. Simply put, in order to avoid apprehension by police, prevent violence and theft, and increase the monetary return, illicit drug dealers want greater control over the exchange

of drugs and money. Therefore, Rengert argued, when selecting a location for drug sales, the dealers must select a location "whose nearest residents are too disorganized to know or care, or feel too helpless to confront the drug dealer who is operating in their neighborhood" (p.110). Thus, at the retail level, Rengert relates the spatial distribution and diffusion of illicit drug markets to the quality of life and viability of the communities.

According to Rengert, while the illicit drug markets increase property and violent crime that mainly involve the distributors and addicts in the community, stable residents can confront the problem with increased community organization, block watches and greater demand for police services or apply target hardening strategies to prevent violent and property crimes. However, in most cases, the residents decrease their outside activities as the local streets become more disorganized and less safe. As a result of such withdrawal from neighborhood life, law abiding residents who can afford to leave the neighborhood move to safer places and prospective home owners and banks avoid investing in these high-crime areas. This leads to further deterioration of the community by decreasing the remaining stable residents' ability to resist drug distributors and crime. Rengert states that the process of deterioration and disorganization of formerly stable communities through drugs-crime, crime-drugs cycle and its spatial expansion exist in many parts of Philadelphia with the result that property and violent crimes are concentrated in relatively small, contained drug sale neighborhoods.

In this context, in addition to the impact of population and geographic proximity on the spatial distribution of illicit drug markets -as assumed by the hierarchical diffusion model-; the cycle of drugs-crime and crime-drugs calls for the consideration of other structural characteristics of the communities that increase social disorganization and

disorder in a community as both could negatively impact community resistance to the establishment and diffusion of illegal markets and thus spatial distribution of these markets.

3. Ecological Approach to Law Breaking: Social Disorganization and Disorder

Having its roots in the studies of Querry and Guetelet in the 19th century (Burke 2001), structural/ecological approach to law breaking situates the individual in his/her community or neighborhood mainly based on the contributions of Park and Burgess and their human ecology model. Borrowing from the idea of studying plants and animals in their natural habitat and assuming that the city is similar to a body with its different organs, Park and Burgess developed what is generally known as the human ecology model. Simply put, they hypothesized that the city of Chicago consisted of 5 concentric zones and delinquency would prevail in Zone II or the 'zone in transition'. Built in the shadow of ageing factories, the 'zone in transition' was the least desirable living area and occupied by the influx of the immigrants and those who were too poor to live in elsewhere in the city (Burke, 2001). Therefore, the transitional zone was the most unstable part of the city, and it was characterized mainly by the attrition of residents and businesses and a break down in mechanisms of institutional social control (Reid, 2000).

Without ignoring the importance of individual factors, they argued, individual experience was contingent upon where that individual lived; therefore, the neighborhood/community level indicators could also precede the impact of individual traits on criminal experience in a causal explanation of criminality (as well as victimization and fear of crime). This notion of individual experience that is situated in

the neighborhood/geographical context was a significant inspiration for the development of the social disorganization perspective that dominated modern American criminology since the early 20th century starting with the contributions of Shaw and McKay (Cullen & Agnew 2006; Snell, 2001).

(1) Shaw and McKay's Social Disorganization Theory

Social disorganization theory is referred to as one of the earliest structural approaches to the study of crime (Meier, Kennedy, and Sacco, 2001). Despite the contributions of ecological work conducted before (i.e., by Breckinridge and Abbrott in Chicago; Burgess in Kansas; and McKenzie in Columbus as cited in Snell, 2001, 26), Clifford Shaw and Henry D. McKay's social disorganization perspective is believed to have set the foundations of modern American criminology in several ways. In theoretical terms, social disorganization perspective provided an empirical test of concentric zone theory (Burgess, 1967) as well. However, given their long term research based on both official data and case studies of delinquent careers (such as The Jackroller,1930; The Natural History of a Delinquent Career,1931; Brothers in Crime,1938), rather than testing a theory, it was a tremendous effort that fairly can be regarded as development of a theory in itself. In methodological terms, relying on a 20 years of data collection including juvenile court records, census reports, and housing and welfare records, it exemplified the first longitudinal study of a city as regard to crime and criminality.

One of the most important findings documented in Shaw and McKay's seminal work *Juvenile Delinquency and Urban Areas* (in 1942; Shaw and McKay, 1972) was that although the high delinquency rate neighborhoods were associated with African American and immigrant populations, the rate of delinquency remained stable despite

almost entire population (ethnic/racial) shifts in these neighborhoods. Moreover, none of the certain ethnic and/or racial group demonstrated stable/uniform rate of delinquency across all the neighborhoods in the city in that period. In contrast, the delinquency rate of a certain ethnic/racial group had a lot to do with the number of the members of that specific group in high crime rate areas. This finding represented a remarkable departure from psychological and biological explanations of law breaking and provided significant evidence for a sociological approach along with their other findings that indicated higher delinquency rates in lower socioeconomic areas, in the neighborhoods closer to center of the city and in heavy industrial areas.

Based on these findings, they offered a social disorganization perspective which argued that higher crime rates in these neighborhoods were related to the characteristics of the communities (which is also called contextual effect) rather than the psychological or biological traits of the individuals (compositional effect) moved into these communities (Cullen and Agnew, 2006). Although the association between structural processes and delinquency rates did not offer a causal explanation for high crime rates per se, Shaw and McKay applied case study methods and used life histories and extensive interviews to develop their theoretical insights in regard to the relationship between characteristics of the communities (i.e., mobility, poverty, and heterogeneity) and high delinquency rates. The core of their theoretical argument was that rapid population turnover in urban neighborhoods resulted in a breakdown in both formal organizations and informal social controls.

Put differently, more consistent and uniform conventional values and norms in the low delinquency rate areas and competing and conflicting values in high delinquency

neighborhoods (Shaw and McKay, 1972, 170) led Shaw and McKay to conclude that there was no consensus over the values for or against criminal behavior and that there were conflicting beliefs about the appropriate behavior in high delinquency neighborhoods (Snell, 2001). This conflicting beliefs and lack of consensus and informal control is also expected to promote intergenerational transmission of cultural values supporting delinquency through exposure to such contradictory standards (Shaw and McKay1972, 172) and association with delinquents and negative reinforcement by delinquent groups (Shaw and McKay, 1972, 174). Moreover, Shaw and McKay also talk about many opportunities for delinquent activities and lack of conventional opportunities as well as about struggle for position in social order with such limited means/opportunities in high delinquency neighborhoods (Shaw and McKay, 1972, 186-187). Thus, besides their own contribution through the social disorganization framework, Shaw and McKay also contributed to the development of control theories, cultural and subcultural theories, Sutherland's Differential association theory (Sutherland, Cressey, and Luckenbill, 1992), and Merton's (1938) anomie theory.

Unfortunately, such diversity of theoretical insights also gave rise to the criticism of their work (Bursik, 1988; Bursik and Grasmick, 1993). Since they borrowed from different theories, Shaw and McKay were mainly criticized because of being too eclectic and contradictory in their explanations of the link between delinquency and neighborhood characteristics. Kornhauser (1978) argues that Shaw and McKay draw freely on the elements of control, strain, and cultural conflict theories, yet the implications of those theories are not consistent all the time (also see Akers, 1985 and Liska et al., 1988). In fact, because of the lack of a clear definition of social

disorganization, some other scholars (i.e., Lander, 1954; Pfohl, 1985) confused this concept with what it was intended to explain (Bursik, 1988).

(2) Reformulation of Social Disorganization Theory and Empirical Findings

To address the criticisms and demonstrate the relevance of social disorganization perspective, Sampson (1986) tried to clarify the process through which ecological characteristics of the neighborhood influenced the neighborhood crime and victimization rates. Sampson (1986) argued that rapid population turnover, ethnic and racial heterogeneity and disrupted families (Sampson, 1987) decrease the neighborhoods' ability to socialize and supervise the youth because of a breakdown in social integration. At the same time, Sampson asserted, rapid population growth or urbanization (Sampson, 1987) would exacerbate the situation because of the ebb and flow of the people for variety of reasons (i.e., work, recreation,) which further decrease the ability of the neighborhood to control the environment. For the neighborhoods with low socioeconomic status, it would also be quite difficult to acquire the resources that could help to address such problems.

Thus, the combination of these macro level characteristics (instability, heterogeneity, family disruption, urbanization, and poverty) in the neighborhood was expected to produce illegitimate opportunity structures and dysfunctional lifestyles including violence and crime. On the one hand, research on these macro level correlates of neighborhood delinquency rates did not always produce consistent findings as regard to variation of crime rates across different neighborhoods (Chamlin, 1989; Hartnagel and Lee, 1990; Land, McCall, and Cohen, 1990, 923; Loftin and Parker, 1985; Neuman and Berger, 1988;). On the other hand, a considerable number of studies found significant

relationship between macro level neighborhood characteristics and crime rates, though sometimes they do not directly test social disorganization theory. To illustrate, prior research found significant positive relationship between *poverty and crime:* Crutchfield, Geerken, and Gove (1982), Miethe and Meier (1994), Mladenka and Hill (1976), Patterson (1991), Sampson, (1986), Smith and Jarjoura (1988), Warner and Pierce (1993); *heterogeneity and crime:* Smith and Jarjoura (1988), Warner and Pierce (1993); *instability/mobility and crime:* Crutchfield et al. (1982), Miethe and Meier (1994), Patterson (1991), Warner and Pierce (1993); *family structure (disruption) and crime*: Smith and Jarjoura (1988); *urbanization and crime*: Sampson and Groves, (1989).

Even though the notion of community integration and informal social control was implicit in the speculative interpretation of the impact of the ecological characteristics on neighborhood crime rates, the process through which such ecological characteristics influenced (or failed to influence) neighborhood crime rates was not incorporated into empirical tests of the Shaw and McKay community social disorganization theory until 1989 - when Sampson and Grove identified and tested the intervening role of relational networks, supervisory capacity of the neighborhood, and organizational participation as mediators of neighborhood characteristics on delinquency rates. Sampson and Grove (1989) utilized data from Great Britain on 238 neighborhoods in 1982 and another independent sample of residents from 300 neighborhoods in 1984 and found that social disorganization (comprised of relational networks, supervisory capacity, and organizational participation in the neighborhood) , mediated the impact of community structural characteristics (low economic status, ethnic heterogeneity, residential mobility and family disruption) on the rates of both criminal victimization and offending.

Sampson and Grove's study is regarded as the first and most complete study that provides a convincing test of Shaw and McKay's social disorganization theory (Bellair 1997, 679; Sun, Triplett, and Gainey, 2004). Thus, Sampson and Groves did not only empirically explain and test the process through which the neighborhood ecological characteristics influenced delinquency rates, but they also made an empirical distinction between social disorganization and its manifestations. Empirical validity of Sampson and Groves findings are supported by the reanalysis of their findings based on LISREL analysis by Veysey and Messner (1999) and replication of both the original study based on 1994 British Crime Survey and Veysey and Messner's reanalysis (Lowenkamp, Cullen, and Pratt, 2003), though Veysey and Messner (1999) and later Sun et al. (2004) reported mixed results as regard to the effects of structural antecedents on crime rates and the mediating role of social disorganization factors between the former two. Yet, to a large extent, structural characteristics of the neighborhoods predicted their measurement of social disorganization and higher levels of social disorganization in turn, led to higher levels of neighborhood crime – which was consistent with Shaw and McKay's (1972) conclusion.

Thus, with the contributions of Kornhauser (1978), Bursik (1988), and Sampson and Groves (1989), social disorganization has been defined as the inability of a community structure to realize the common values of its residents and maintain effective social controls (Sampson, 2002). Furthermore, drawing from Kornhauser's explication of control theory (1978) and also relying on Hunter's (1985) description of three levels of direct controls, Bursik and Grasmick (1993) extended social disorganization theory by developing a neighborhood control theory grounded in systemic theory of community

organization (Berry and Kasarda, 1977). A control oriented theoretical approach, Bursik and Grasmick (1993) argued, could provide a better framework for understanding Shaw and McKay's argument. That is, rapid population turnover and heterogeneity could decrease the ability of a neighborhood to control itself in order to prevent crime for following reasons (Bursik, 1988, 521; Bursik and Grasmick, 1993, 33):

1. Institutions pertaining to internal control are difficult to establish when many residents are "uninterested in communities they hope to leave at the first opportunity" (Kornhauser, 1978, 78).
2. The development of primary relationships that result in informal structures of neighborhood control is less likely when local networks are in a continual state of flux (Berry and Kasarda, 1977).
3. Heterogeneity impedes communication and thus obstructs the quest to solve common problems and attain common goals (Kornhauser, 1978, 75).

Even though Shaw and McKay mentioned the importance of family ties and friendship networks, systemic control approach to the neighborhood control considers these ties and networks as an essential part of regulation and socialization. More specifically, Bursik and Grasmick assume that there is a consensus among the residents of neighborhoods to live in an area relatively free from the threat of crime. Therefore, in order to achieve this common goal, the community regulates itself and the behavior of the residents and visitors to the neighborhood through social control. In this regard, the crux of Bursik and Grasmick's neighborhood control theory is that differences in neighborhood crime and victimization (as well as fear of crime) can be explained by the variations in the abilities of these neighborhoods to regulate and control the behavior of

their residents and visitors. And they adopt Hunter's (1985) three level approach to local control: private, parochial, and public level of control.

At the private level, rapid population turnover and instability make it difficult to establish and maintain intimate primary ties that promote social control through the allocation or withdrawal of sentiment, esteem, and support. While instability impairs the density of relational networks, racial and ethnic heterogeneity limit the breadth of such networks. Parochial order is the second level of control that refers to the ability of the neighborhood to supervise the behavior of its residents through broader level local interpersonal networks and local institutions such as schools, churches, and voluntary organizations. Instability and heterogeneity are also believed to weaken parochial control as the people become less likely to know each other, like strangers in the same neighborhood. Snell (2001) also incorporates family disruption as a component of community self regulation referring to Sampson's (1986) argument regarding the positive impact of parents on effective socialization and supervision both in the family and in the neighborhood.

Finally, public order is regarded as the most important component of the community self regulation as the ability of local networks and institutions are believed to be contingent upon external organizations that may even give rise to the development of private and parochial networks through investment of their projects. Simply put, the public level of control refers to the ability of the neighborhood to secure such external resources in the form of public goods and services. Bursik and Grasmick (1993) offer two forms of such control. First, the ability of the local community and organizations to influence public service providers (i.e, municipalities and public-private decision making

agencies) in order to allocate economic resources to control neighborhood crime and the second one is the relationship between the neighborhood and local police department.

Overall, according to the systemic control approach and specifically to Bursik and Grasmick's (1993) interpretation of systemic control under the neighborhood control theory, density and breadth of private and parochial networks as well as the neighborhood's ability to secure external resources matters in terms of the neighborhood's ability to exert formal and informal social control-which in turn accounts for the variation of crime/delinquency/victimization/fear of crime across different neighborhoods. In this regard, the systemic control approach builds on Shaw and McKay's original discussion regarding the regulatory role of family networks and networks of friends in the socialization process and extends social disorganization theory by identifying two other sources of control (parochial and public). Thus, the causal linkage between ecological characteristics of the neighborhoods and crime is mediated by these three levels of control. Ecological characteristic of the neighborhoods are considered important only when they support a breakdown of primary, parochial, and public level control and thus promote a lack of consensus in the neighborhood.

(3) Contemporary Research on Social Disorganization: Extension and Criticism of the Systemic Control Model

Following afore mentioned theoretical extension and clarification of the original argument of Shaw and McKay, although recent research on systemic control model of social disorganization produced quite consistent results regarding the positive impact of neighborhood structural characteristics on social disorganization and crime rates (Bellair, 2000; Sun et al., 2004), the impact of social disorganization factors and specifically local

friendship networks on crime is not as straightforward as assumed in Sampson and Grove's (1989) model. To begin with, Veysey and Messner's (1999) afore mentioned reanalysis of Sampson and Grove's data through structural equation modeling produced only moderate support for Sampson and Grove's model in regard to the mediating role of social disorganization factors. That is, while social disorganization mediated the impact of low SES, racial heterogeneity, and residential mobility on crime, it had no impact on the relationship between family disruption and crime. In fact, Vessey and Messner (1999) goes beyond Sampson and Grove's original framework when they identify both direct and indirect impact of local friendship networks and organizational participation on crime through unsupervised youth groups. Thus, besides its mediating role on the association between local friendship networks and crime as well as on the relationship between organizational participation and crime, unsupervised youth groups was the only component of social disorganization that had direct impact on crime.

More recently, using the data from 36 neighborhoods in seven U.S. cities, Sun et al. (2004) tested Sampson and Grove's (1989) model of systemic control and they also found a similar mediating impact of unsupervised youth groups on the relationship between crime and neighborhood structural characteristics and also on the association between crime and other social disorganization factors (local friendship networks and organizational participation). Building on similar findings of Vessey and Messner's (1999, path diagram on p.166) reanalysis of Sampson and Grove's (1989) data, Sun et al. (2004, path diagram on p.8) argued that unsupervised youth groups should be considered as the failure of informal social control and added as another component to Sampson and Grove's (1989) model.

Therefore they speculated in favor of an extended systemic control model that also incorporates unsupervised youth groups as another independent variable. According to their argument, neighborhood structural characteristics (poverty, heterogeneity, mobility, and family disruption) give rise to social disorganization reflected in the form of weak relational ties and low organizational participation, and this in turn decreases the community's ability to exert informal social control as indicated in the form of unsupervised youth and groups, and finally failure of effective informal social control then directly increases law breaking in the community.

Even though Sampson and Grove's (1989) systemic control model was inspirational for the studies of neighborhood effects during the 1990s (Bellair 1997; Veysey and Messner, 1999; Warner and Rountree, 1997), contemporary research on the variation of delinquency across different neighborhoods have difficulties in terms of explaining the relationship between informal social control and social and organizational ties. For example, though their systemic control model treated social and organizational networks as a source of informal social control, Warner and Rountree's (1997) test of the impact of local friendship networks on neighborhood crime rates indicates that whereas local friendship networks have significant negative effect on neighborhood rates of assault, they have significant positive effect on neighborhood rates of burglary. These contradictory findings also gave rise to the subcultural criticism of the systemic control model of social disorganization which was mainly about the failure of systemic control model to account for higher crime neighborhoods with relatively strong relational networks.

Acknowledging the controversial role of relational/social networks in the neighborhood's ability to regulate the behavior of its residents and visitors, Sampson, Raudenbush, and Earls (1997) tested a new model which attempted to decouple the impact of social networks and informal social control on crime through a new concept incorporated into the systemic control model: collective efficacy. Collective efficacy represents the degree of cohesion and trust among neighborhood residents as well as their "willingness to intervene on behalf of the common good" (Sampson et al., 1997, 918; Morenoff, Sampson, and Raudenbush, 2001). Put differently, whereas Sampson and Grove's (1989) model considers the density and prevalence of local friendship networks as a source of informal social control, collective efficacy represents relatively more direct measure of informal social control (Sampson et al., 1997) as it also involves the measures of residents' trust, cohesion, and their willingness to intervene (also see Sampson, Morenoff, and Earls, 1999).

Sampson et al.'s (1997) study on collective efficacy found significant negative impact of collective efficacy on homicide in 343 Chicago neighborhoods. Morenoff et al. (2001) also found that while friendship and kinship ties among neighborhood residents positively predict levels of collective efficacy in Chicago neighborhoods, once the level of neighborhood collective efficacy was controlled, kinship and friendship ties didn't have a significant impact on homicide rates. Relying on this finding, they argued that collective efficacy does not require interconnected neighborhood networks. In fact, Sampson (2002) also confesses that he was wrong in terms of overstating the taken for granted impact of social ties on informal social control (Sampson and Grove, 1989). Thus, relationship between breadth and density of social ties and informal social control

was decoupled based on a distinction provided by the concept of collective efficacy that puts more weight on the mutual trust/cohesion and willingness to control in the neighborhood rather than the prevalence of the networks. Therefore, the impact of social ties on the crime rates was contingent upon the notion of collective efficacy in a given neighborhood and collective efficacy could vary across different neighborhoods as a function of neighborhood structural characteristics (Sampson et al., 1997).

There is no doubt that Sampson et al (1997) was quite successful in terms of addressing subcultural criticisms in terms of the ability of social disorganization theory in explaining high crime neighborhoods with relatively strong networks/social ties. They demonstrated that collective efficacy or what we can also call social organization (as opposed to disorganization) is not a simply having close relational/social ties, but rather is the process of activating or converting social ties to achieve desired outcomes (Sampson et al., 1999, 635). Thus, first and foremost, there is an assumption about a consensus on the desire of community residents to live in safe and orderly environments free of (especially) predatory/violent crime (Sampson et al., 1997; also see Bursik, 1993 and Skogan, 1990) and the ability of residents to control group level processes and visible signs of disorder is considered as a key mechanism that influences opportunities for law breaking and interpersonal crime in a neighborhood.

Apparently, following the reformulation of social disorganization theory in accordance with the underlying premises of systemic control, contemporary research have put relatively more emphasis on the three levels of social control explained above. However, contemporary research does not contradict but builds on Shaw and McKay's original argument about the impact of ecological characteristics of the neighborhoods on

law breaking and just clarifies the link between these structural antecedents and spatial distribution of crime/victimization rates.

As far as the spatial distribution of the illicit markets is concerned, therefore, in addition to the size of the community and geographic proximity as assumed by Rengert's (1996) hierarchical diffusion model, poverty, instability, heterogeneity, urbanization, and family disruption can also impact establishment of illicit markets in that community through their influence on informal and formal social controls prevailing in the society. Simply put, the ability of the community to resist the establishment and activities of illicit markets could be attenuated by communities' ecological characteristics. To the extent that these structural characteristics promote lack of primary, parochial, and public level of control, related consequences such as lack of relational and friendship networks, weak social bonds and cohesion, increased anonymity, decreased supervision, lack of consensus and low organizational participation could benefit the distributors of illegal markets and facilitate their diffusion into the community.

(4) Disorder, Decline, and More Serious Crime: Prostitution, Human Trafficking, and Other Serious Crimes

In addition to informal and formal social controls, contemporary research incorporated disorder into the social disorganization framework to clarify the association between community characteristics and crime. In general, disorder refers to violation of norms regarding public behavior and is comprised of two dimensions: Social and physical. "Social disorder is a matter of behavior: you can see it happen (public drinking, or prostitution), experience it (catcalling or sexual harassment), or notice direct evidence of it (graffiti, or vandalism). Physical disorder involves visual signs of negligence and

unchecked decay: abandoned or ill-kept buildings, broken streetlights, trash-filled lots, and alleys strewn with garbage and alive with rats" (Skogan, 1990, 4).

Although some researchers avoided making a distinction between crime and disorder (Garafalo and Laub, 1978; Sampson and Raudenbush, 2001, 2) and argued that both had a common origin, others suggested that disorder needs to be distinguished from more serious crime problems facing the same communities (Skogan,1990; Wilson and Kelling, 1982). Using aggregated indicators based on citizen perceptions of disorder and crime, Taylor, Bazemore, Boland, Clear, Corbett, Feinblatt, Berman, Sviridoff, and Stone (1998) reported that (physical and social) disorder is distinct from community structure and community crime rates at neighborhood level. Analyzing individual perceptions of disorder and personal victimization of 13, 918 people from 12 U.S. cities, Worrall (2006) also indicated that disorder represents a construct different from estimates of crime, though not all of the disorder measures enjoyed discriminant validity.

According to Wilson and Kelling's "Broken Windows" (1982) thesis, disorder and crime are usually inextricably linked in a kind of developmental sequence at the community level. Unchecked rule breaking, Wilson and Kelling argued, undermines community social control and gives rise to serious crime. Prevailing disorder in the neighborhood leads law-abiding residents to think that nobody in the neighborhood cares about what is going on in their environment and this makes them withdraw from public life as they assume that the neighborhood is disorganized and not safe (Lewis and Salem, 1986). Once the residents withdraw from the public life, they become less motivated to intervene in physical and social disorder around them and such ongoing tolerance for

disorder also attracts outside trouble makers as a signal of increased opportunity for delinquent or criminal behavior.

Using perceived measures of robbery victimization and physical and social disorder, Skogan (1990) provided an empirical test of Wilson and Kelling's "Broken Windows" thesis based on a survey of 13,000 residents in 40 neighborhoods of six different cities in the U.S. Analysis of the robbery victimization in 30 of the neighborhoods demonstrated that the effects of poverty, instability, and racial composition on robbery were mediated by disorder. Thus, Skogan (1990) incorporated disorder into the social disorganization framework and concluded that crime and fear were linked to disorder and disorder preceded crime in the neighborhoods surveyed.

Through his empirically supported disorder and decline model, Skogan (1990) prioritized neighborhood change as the main focus of interest and demonstrated the independent impact of disorder on neighborhood deterioration and decline. Neighborhood change does not directly increase the crime or lower the quality of life as stable neighborhoods are likely to react and fight back unwanted and destabilizing changes through community organization and increased demand for formal control in the area. However, in relatively unstable communities, an emergent disorder problem would fuel more serious forms of disorder and crime in the community. Similar to Wilson and Kelling's (1982) argument about withdrawal from the community life, Skogan (1990) also pointed to physical and psychological withdrawal from the neighborhood life in times of ongoing disorder and crime. On the one hand, physical moves from the community negatively influence the housing market and prevent investment in the neighborhood. Psychological isolation, on the other hand, undermines mutual

responsibility among the residents, weakens informal social control, reduces participation in neighborhood affairs, and thus foreshadows a general decline in the community's organizational and political capacity (p.13). Overall, visible social disorder, including drug dealing, prostitution, and sexually-oriented enterprises, provides direct behavioral evidence of community social disorganization and feeding upon themselves, disorder and crime contribute to the deterioration of local housing and business conditions as well (Taylor 1995).

Bursik and Grasmick (1993) also contended that social disorganization theory should be extended to also account for such feed back loops/processes. They suggested, "...disorder and crime are not just the outcomes of the process of neighborhood disorganization, but also that they are an integral part of that process" (p. 313). In fact, contemporary research on social disorganization framework has largely draw upon reciprocal relationships between disorder, informal social control, and fear of crime in the community. Recently, using a sample of neighborhoods from three waves of the British Crime Survey, Markowitz, Bellair, Liska, and Liu (2001) reported that while Low SES, ethnic heterogeneity, family disruption, and residential instability increase disorder, cohesion reduces disorder and mediates part of the effects of the exogenous variables on disorder. Then they tested a three endogenous variable model including fear of crime, disorder and cohesion and suggested that the effect of disorder on serious crime may operate indirectly through increased fear and reduced cohesion (see also McGarrell, Giacomazzi, and Thurman, 1997). Most recent studies on the disorder-crime nexus demonstrated that disorder elicits more fear than crime (Kelling and Coles, 1996) and that

disorder has strong direct, indirect, and total effects on crime even with collective efficacy being controlled (Xu, Fiedler, and Flaming, 2005).

Finally, despite a considerable number of studies based on perceptive and/or objective (i.e., observation; Taylor, 2001) measures of social and physical disorder, only a limited number of studies looked at the relationship between more reactive measures of disorder and crime. Of only two studies that focus on the relationship between officially recorded indicators of disorder and crime, Weisburd and Green-Mazerolle (2000) investigated the relationship between street level drug hot spots, crime and disorder problems in Jersey City, New Jersey. This exploratory study demonstrated that street level drug hotspot activity, crime, and disorder problems cluster in certain areas of the city and these areas characterized by drug hotspot activity had disproportionate share of crime and disorder problems even compared to non-drug hotspot areas. Despite the lack of controls for alternative explanations, this descriptive analysis of drug hotspots support the idea of spatial association between disorder (illegal drug market activity) and crime based on official data and deserves further investigation.

Most recently, a second study investigated the relationship between disorder and crime adapting a longitudinal perspective based on county level arrest data in California. Worrall (2006) sought to determine whether there is a link between arrests for disorderly conduct and subsequent reduction in serious crime. Controlling for several other common factors that are known to influence the crime rates, Worrall (2006) found that between the years 1989 and 2000, arrests for disorderly conduct (arrests for disturbing peace and public drunkenness divided by total arrests) could reduce certain crimes, particularly felonious assault and burglary.

Overall, using perceptive, objective, and reactive measures of disorder and crime, empirical research has provided substantial evidence on the spatial concentration of (physical and social) disorder and crime at different levels of analysis. Recent studies evince that tolerance for disorderly behavior leads to more disorder and crime in the community. In this regard, as an indication of existing social disorder, tolerance for immigrant prostitution in a given community, which might also be considered as demand for the sexual services, can also contribute to more serious crime and human trafficking in a community.

CHAPTER THREE

LITERATURE REVIEW

Given the dearth of cross-national research on the subject, comparative and regional studies as well as national reports on human trafficking are reviewed in this chapter to identify significant factors those could impact the geography of human trafficking at national and international levels in light of the proposed framework. In order to recognize the impact of demand on human trafficking in a country, prostitution and trafficking in women for the purpose of sexual exploitation related research has also been included.

1. Globalization, Migration, and Cross-national Distribution of Human Trafficking

More of a generalization of diverse set of migration theories than a single theory per se, migration systems theory conceptualizes migration as embedded in the broader processes of economic, demographic, social, cultural and political change. At macro level, political economy of the world market, interstate relationships, migration regulations and their enforcement are all assumed to be influential on migration (Kritz, Lim, and Zlotnik, 1992). More specifically, migratory movements generally arise from prior links between sending and receiving countries based on trade, colonization, investment, or political influence. Thus, whereas Algerian migration to France is explained by the colonial presence of France in Algeria, Turkish presence in Germany is mainly a result of labor recruitment by Germany in the 1960s. Korean and Vietnamese migrations to America, on the other hand, are seen as a consequence of long-term U.S. military involvement (Castles and Miller, 2003).

Internal and international migration can thus be regarded as an integral part of globalization -as globalization simply means increased worldwide interconnectedness which, through the cross-border flows of finance, trade, media, products, and people, links previously isolated areas into the broader national and international markets based on economic development. While economic development instigates the modernization of agriculture, it also provokes social differentiation and displacement of labor. In the first place, this precipitates rural-urban migration, though recent industrialization might be too slow to respond increasing demand for urban employment opportunities. And, as soon as overseas employment opportunities become apparent, in addition to internal rural-urban migration, international migration also grows (Castles, 2000).

Although population mobility is expected to follow other types of cross-border flows in the process of globalization, immigration (and related cultural difference) is not always welcomed by economic and political powers as much as the flow of capital and commodities since the former is regarded as a potential threat to national identity and state sovereignty (Koser, 2005). But at the same time, urbanization of developing societies and related displacement of the people give rise to both internal and international migration as the evolution and concentration of production, distribution and exchange in urban centers, primate (Jefferson, 1939) and global cities (Sassen, 1991) create a strong demand for immigrant labor (Massey et al., 1993). Even though such demand is generally met by formal institutions such as recruitment by governments, employers, and recruitment organizations (as in the example of Turkish workers' recruitment to Germany in 1960s), extra-legal networks, such as smugglers and

traffickers also emerge to exploit especially those who can not qualify or afford the legal services of formal institutions (Kritz et al., 1992, 7).

In sum, according to the migration system framework, in addition to formal recruiting agents, traffickers also link global and local as well as the individual and structure within the complex process of migration; yet, whereas the formal institutions do that in a legal way, traffickers operate illegally and simply prey on the vulnerability of the immigrants, those who desire to migrate for better working and living opportunities in urban centers or abroad but cannot afford or qualify for legal recruitment. To that end, traffickers sometimes make up success stories to lure people into forced labor and exploitation. Although available empirical research on human trafficking has not exclusively relied on migration system framework, given that migration system theory draws on different frameworks, several studies have provided support for various assumptions of migration system theory and especially for the impact of globalization and related urbanization on human trafficking in developing countries in recent years.

The first and may be the only cross-national level analysis of human trafficking was provided by Bales in 2005. Bales created an ordinal dependent variable for human trafficking from and to (from 1 to 4/least to most severe trafficking) 111 different countries based on diverse set of sources of information ranging from field research to government reports about human trafficking in these countries. Bales's (2005, 139-140) cross-national multiple regression analysis based on afore mentioned rankings of (on human trafficking from 1 to 4) and demographic information about the countries identified six factors that significantly influence human trafficking from a country (governmental corruption, infant mortality rate, population below age of 14, level of food

production, population density, and conflict and social unrest in the country) and four factors that significantly influence human trafficking to a country (the proportion of the destination country's male population over age sixty, the level of governmental corruption, the level of food production, and low infant mortality). As Bales also suggested, mainly the indicators of prosperity and stability impact the route of human trafficking from and to a country.

However, even though sending countries are largely represented by developing countries (Guinea, Burma, Georgia, Romania) in Bales's data, on the receiving end we see both developing (Thailand) and developed countries (Germany) side by side and sometimes only developing countries on both sides (Turkey, Czech Republic). Hence, conceptualization of human trafficking as including both human trafficking to and from a country as well as human trafficking in a country might paint a different picture for the geography of human trafficking in and across the nations.

There is no doubt that the process of globalization and related social and economic displacements across developing nations has promoted widespread migration to the west in recent years (Laczko et al., 2002). Yet, the majority of irregular migration has claimed to have taken place between developing countries on a global scale (Koser, 2005). It is estimated that there are several million irregular migrants in South and South East Asia and three to five million in South Africa (DESA 2004, cited in Koser 2005). In other words, irregular migration is not simply a South-North issue anymore (Koser, 2005) and as overall migration increases, the incidence and severity of human trafficking has also escalated (Smit, 2004). The flow of human trafficking, thus, is not only toward the

developed countries but developing countries are also the emerging destinations of human trafficking today (Straubhaar, Mayer, Hefeker, Lammers, and Wohlers, 2004).

Asia has been characterized by the growth of a market-driven intraregional migration for the past two decades as a result of growing global market integration of the region (Lee, 2005). The number of illegal migrants moving across the countries in the region is a lot more than the number of illegal migrants who leave the region. Yet, differences in development within the region also impact these illegal flows and Malaysia, Thailand, Japan, and Republic of Korea have emerged as principal destinations over the last 25 years. In the course of such illegal movements toward neighboring countries in the region, more than 200,000 Bangladeshi women are trafficked to India and Pakistan whereas many underaged Nepali girls are recruited into prostitution in Indian cities (Skeldon, 2000). Many non-Japanese women are also recruited into large sex industry in Japan. Traffickers in China are reported to intrude young women's rural-urban migration and force them into sexual services in neighboring countries (Lee, 2005).

Drawing upon several sources of information, a case study of human trafficking in Nepal (Smit, 2004) concluded that around 20, 000 children, men, and women are trafficked in Nepal annually. Trafficking from rural to urban locations prevails as much as trafficking to neighboring countries especially India and to further destinations such as South East Asia and the Middle East. Economic disparities between rural and urban locations in Nepal and the booming Indian economy are indicated as root causes of internal and international migration and human trafficking in these countries.

Kangaspunta's (2003) descriptive analysis of the UNODC trafficking trend database also contrasts with the conventional belief that basically categorizes the

developing countries as source and industrialized/developed countries as the destination points based on the assumptions of neoclassical perspective. A global database on trafficking trends was established under the Global Program against Trafficking in Human Beings (GPAT) of the United Nations Office on Drugs and Crime (UNODC) in order to systematically collect and collate open source information on trafficking in persons. Kangaspunta's preliminary analysis of the database indicated that a total of 147 countries were mentioned at least once as a country of origin. At regional level, the Asian countries were mentioned most as the countries of origin and they were followed by the countries in the former Soviet Union region and Africa. There were relatively small numbers of citations for industrialized countries as countries of origin. Out of 96 countries mentioned as transit countries in the database, Central and South Eastern European countries were the most cited. When it comes to 150 countries those mentioned as destination countries, although the favorite destinations involved industrialized countries, Asia was as much an origin as a destination region. Moreover, countries in Africa, Central Eastern Europe, Latin America and Commonwealth of Independent States were also cited as destination points of human trafficking.

The UN revealed information on human trafficking across different countries based on a more recent (UNODC, 2006) version of the same database on human trafficking trends which documents trafficking of human beings from 127 countries to be exploited in 137 countries. In region wise analysis of the data, Africa is predominantly defined as an origin region for victims of trafficking who are trafficked to Western Europe and West Africa. West Africa is defined as both origin and destination for victims of trafficking from Africa. Asia, on the other hand, is referred to as major origin as well

as destination country for trafficking victims. That is, Asian victims are reported to be trafficked to Asian countries, in particular to Thailand, Japan, India, Taiwan and Pakistan. Victims from Commonwealth of Independent States and South Eastern Asia are reported to be trafficked into the countries in the region. Central and South Eastern Europe is also reported as a destination country for the victims from the CIS region whereas the victims from both CIS and Central and South Eastern Europe are trafficked to Western Europe and North America. Latin America and the Caribbean are also reported mainly origin as well as destination regions for trafficking victims. Finally, Oceania, in particular Australia and New Zealand are predominantly reported as destination spots for the victims from South Eastern Asia.

In the analysis of human trafficking in the Commonwealth of Independent States (ICMPD, 2005), victimization of rising numbers of women and children in almost all twelve countries in the region is also defined as related to economic transition processes and ongoing restructuring of the labor market. Whereas trafficking for sexual exploitation is directed to Western Europe, South East Asia, and the Middle East; trafficking for labor exploitation mostly takes place toward Russia and Kazakhstan. In addition to such intraregional and interregional flows, trafficking also occurs internally from rural areas to urban areas for sexual exploitation especially in Belarus, Azerbaijan, Uzbekistan, and Kazakhstan.

Many African countries have also become origin, transit, and destination points for traffickers and trafficked victims (Surtees, 2005). Trafficking in Africa takes several different forms and includes large number of African children and women who are trafficked from rural to urban areas for labor and sexual exploitation. Intraregional

trafficking also prevails among the countries in the region including Nigeria, Ghana, Côte d'Ivoire, Senegal, Ethiopia, Kenya, Cameroon, Mali, Gabon and Niger. While South African women are trafficked to East Asia for sexual exploitation, the women from China, Thailand, Eastern Europe, and Russia, on the other hand, are found to be trafficked to South Africa.

Apparently, not only the industrialized regions and the countries in those regions, but also relatively less developed regions of the world and countries in these regions are likely to be destination points of human trafficking. Moreover, whereas the industrialized regions and countries are mostly cited as destinations, developing regions and countries are more likely to be on both ends of human trafficking if we were to conceptualize human trafficking as a process which simply involves recruitment, transportation and exploitation of the victims. In this case, as long as human trafficking is operationalized as a combination of human trafficking from and to OR recruitment and exploitation in a country, developed countries are likely to have less problem of human trafficking compared to developing countries. It's because, foreign investment and related urbanization and social and economic instability in developing countries would fuel rural-urban migration and provide opportunities for the traffickers to prey on those who attempt to leave for better employment opportunities in urban centers in their own country. As soon as urban employment opportunities fail to meet the demand in these developing nations, then traffickers would also target those who become aware of employment opportunities in developed countries or lure the people with fake promises of such opportunities to exploit them in origin and more developed countries.

Overall, given the differential impact of globalization on developed and developing countries and based on the review of the research as regard to the distribution of human trafficking across developed and developing countries; the level of development and urbanization seem to be influential on cross-national distribution of human trafficking in light of the migration system approach. The following section, on the other hand, focuses on the national distribution of human trafficking markets.

2. National Distribution of Human Trafficking

Migration systems theory provides a framework that can help to understand the distribution of human trafficking at broad level of analysis across the world nations. The analysis of the distribution of human trafficking in a single nation, on the other hand, calls for further elaboration. As Sassen (1996 and 2000) argued, globalization and related increase in international relations mainly based on economic investment and development also have local as much as global impact. That is, large metropolitan cities are mainly the places where globalization is embodied in the form of exchange of money and ideas or the growth of immigrant presence in such places. Yet, human trafficking in a country is not limited to solely global or primate cities, though such places might be exploited relatively more by the traffickers.

Geographers suggest that the spread of innovations, epidemics, and urban decay in space and time occurs in a similar pattern, reflecting the social, economic, and geographic structuring of an underlying community (Wallace and Wallace, 1993). These patterns, on decreasing spatial scales, are generally classified as hierarchical, spatially contagious, and network diffusion. Hierarchical diffusion refers to the spread from larger, more socially dominant cities to smaller ones, usually along the transportation

(national/international) networks. Spatial contagion or expansion diffusion involves the radial spread from an infected geographic epicenter into nearby communities. Network diffusion involves transmission along personal, domestic and community social networks (Wallace and Wallace, 1993; Wallace, Huang, Gould, and Wallace, 1997).

Rengert (1996) explored the implications of these processes for the geography of illegal drug markets in the U.S. Based on his analysis of official data on illegal drug use and distribution across different regions, states, counties, cities, and neighborhoods, Rengert found that the diffusion of illegal markets is driven by reinforcing motivations of two active agents of the illegal drug markets, that is, drug traffickers and the users. In the first place, the distribution of illicit drugs by the traffickers originates in the largest cities and subsequently filters down through an ordered sequence of metropolitan centers of decreasing size, as the larger cities with more population are supposed to have more potential customers compared to smaller urban centers. In addition to the cities with more population, the cities that are closer to established illicit markets or to the places where the illicit commodities are produced/imported/originated are also selected as targets by drug traffickers.

Then, in the second step of Rengert's model, local or neighborhood expansion of illegal markets takes place in each city, and illegal drug distributors expand their activities outward from the central city into surrounding suburban area in an expansion contiguous process in which distant-minimizing effects largely shape the spatial patterns of drug distribution. However, lack of legal protection and the risk of apprehension in illicit markets also influence market location preferences of illegal market distributors and this in turn impacts the spatial distribution of illegal markets as well. In order to

avoid apprehension by police, prevent violence and theft, and increase the monetary return, illicit drug dealers want greater control over the exchange of drugs and money. Therefore, Rengert argued, illegal market distributors prefer the locations where the residents are too weak and disorganized to resist the establishment and activities of illegal markets.

Overall, population size, geographic proximity (to where the illicit goods are produced or imported), and community disorganization and disorder are all expected to shape the distribution of illicit drug markets in space and time in a given country.

Human trafficking, on the other hand, is claimed to be more lucrative (Schauer and Wheaton, 2006) than drug trafficking. Trafficking in women and children is reported to be the third largest source of revenue for organized crime worldwide right behind drug and firearm trafficking by the U.S. congress in 2000 (Miko and Park, 2002). The UN Office on Drugs and Crime also noted that human trafficking has reached epidemic proportions and almost no country is immune (Fergus, 2005). Because of relatively fewer risks incurred in the practice of human trafficking and ease of moving and storing the victims, human trafficking is expected to supersede drug trafficking in following years (Schauer and Wheaton, 2006). Moreover, the same criminal groups that traffic drug and guns are also claimed to involve in human trafficking as well (Raymond and Hughes, 2001).

UNODC undertook a pilot survey of forty selected organized groups in sixteen countries in order to have a better understanding of the structural features of transnational organized crime in 2002. Of the 40 organized crime groups in the survey, eight were involved in human trafficking and of these, only two groups were exclusively involved in

human trafficking whereas for the remaining six groups, human trafficking was only one of diverse set of activities they were involved in (UNODC, 2006). Human trafficking networks in Ukraine are also reported to involve in a variety of criminal activities such as trafficking drugs, stolen cars, guns and conducting robberies as well as murders (Hughes and Denisova, 2001). Recent operations against human trafficking networks in different parts of Turkey also showed that human traffickers are involved in drug trafficking as well (Hurriyet, 2007).

Given simultaneous involvement of criminal entrepreneurs in both drug and human trafficking and functional similarities especially between drug trafficking and trafficking in women for the purpose of sexual exploitation as regard to the role of community (dis)organization and (disorder) on the establishment and activities of the markets, Rengert's (1996) approach to illicit drug markets based on diffusion principles could also apply to trafficking in women as well. Simply put, as distributors of illegal services -such as the exploitation of migrant labor and/or prostitution-, human traffickers would also desire more control over monetary exchange as they can't rely on the civil and criminal justice system to mediate the disputes and protect their business from violent and property crimes. Hence, whereas large metropolitan centers could provide more customers for illegal services of human traffickers, social disorganization and related structural features of a given community would also impact the distribution of human trafficking as traffickers would look for more control over their illegal transactions in order to be able to control potential arrest, theft, and violence (Eck, 1995). Social disorganization and disorder in a community would also benefit the consumers of the illegal services of traffickers and increase the demand for illicit services, for that

community would be less likely to regulate the behavior of its residents and visitors (Bursik and Grasmick, 1993).

Reviewing the problem of human trafficking in five different regions of the world (Asia and the Pacific, Europe, Middle East, Latin America and Caribbean), in a 2005 report for the U.S. Congress, Miko (2005) argued that the flow of human trafficking was mostly from developing countries to industrialized nations or toward neighboring countries with relatively higher standards of living. Despite the lack of reliable statistics, he contended, the former Soviet Union has emerged as the largest new source of trafficking in women for the purpose of sexual exploitation which is followed by Africa and Latin America and the Caribbean. Whereas most of the victims are trafficked to Western Europe, North America, Asia and the Middle East, a considerable number of women are also trafficked to Eastern Europe as well. Miko (2005) asserted that the victims are mostly taken to large metropolitan urban centers, tourist areas, or near military bases where the demand is highest for the services they provide.

The United Nations (2003) also emphasized similar concentrations of human trafficking in major urban centers in the Asia region. Asia is estimated to be responsible for approximately one-third of the total global trafficking; and according to the UN, 60 percent of the women, men, and children are contended to be trafficked to major regional cities whereas the remaining 40 percent are claimed to be trafficked to other parts of the world (cited in IOM 2005, 112). Simply put, whereas intra-regional flow of human trafficking targets regional metropolitan centers, inter-regional trafficking exploits large cities in other parts of the world.

In her review of research on trafficking in women and children in Europe, Kelly (2002) contends that sex industries are quite flexible across the world and they shift their locations as well as their structure and contents through market testing and also in response to informal and formal social controls within the society. The level of trafficking in a given location, on the other hand, depends on the scale of the sex industry and the applicable legal framework. The development and diffusion of human trafficking in Greece provides a good example for Kelly's argument in that the scale of the sex industry in Greece was quite small in 1980s when most of the women came from Poland and Philippines. Yet, traffickers used this period to test market demand and formal and informal reaction from the state and public. The discovery of a conducive context was followed by the growth of the sex industry in Greece and in the 1990s, there were ten times more foreign women and children in the Greek sex industry than local women, most of whom had been trafficked. Trafficking in women and children also had considerable impact on the development of the sex industry in Greece (Lazos, 2001, cited in Kelly, 2002) by increasing the demand as it spread out from Athens to larger cities and villages. Border regions, especially those between the EU countries and the rest of the Europe are also the places to where the women and children are trafficked for the purposes of sexual exploitation.

In their descriptive analysis of human trafficking in the U.S., based on the accounts of the former victims of human trafficking and case studies of official reports in 6 different cities of the US, Bales and Lize (2005) identified poverty and economic disruption in developing countries as the main causes of human trafficking. Between 1011 and 2341 individuals are represented in twelve case studies originating from eight

different countries (Mexico, Guatemala, Argentina, Latvia, Cameroon, Ivory Coast, China, India). The destinations of the victims, on the other hand, were almost exclusively comprised of the States with the largest populations in the U.S. (such as New York/New York City, Maryland, Florida, and Illinois/Chicago). Southwest Florida and Chicago were referred as hot spots of trafficking while Washington D.C. was cited as a newly emerging port of entry.

Bales and Lize (2005) conceptualized human trafficking as a process that mainly involves recruitment, transportation and illegal entry of the trafficked person, the exploitation phase, or the subsequent phase of profit laundering. Half of the cases they investigated involved trafficking operations in the form of simple links between single individuals or agencies providing single service while one quarter of the cases involved segmented businesses involving a criminal network and a legitimate transportation or labor recruitment company. The remaining quarter of the cases involved relatively sophisticated and complex networks dispersed across large geographic distances and long periods of time. Trafficked women were moved around an internal circuit through large metropolitan areas including New York, Miami, Las Vegas, Houston, Reno, Seattle, and San Francisco. According to Bales and Lize, traffickers in the US are engaged in a wide range of crimes against victims (i.e., rape, homicide, assault) and against the state (fraud, corruption of officials, tax evasion, money laundering). The commission of other crimes in addition to human trafficking, they argued, was a rule for the traffickers in the cases they have investigated (p.118).

Raymond and Hughes (2001) also point to concentration of sex industry and trafficking in women in large urban centers in their study on international and domestic

trafficking of women in the U.S. based on the survey of the literature, case studies, and a total of 128 interviews with international and U.S. women who are involved in the sex industry, law enforcement officials, social service workers, journalists, and researchers. According to the researchers, sex trafficking is often a mobile enterprise in both domestic and international terms in that the trafficked women are generally moved from country to country, state to state, and city to city. International trafficking was documented in twenty states including: Washington, Oregon, California, Nevada, Arizona, Colorado, Texas, Ohio, Illinois, Indiana, New York, New Jersey, Maryland, Pennsylvania, Rhode Island, Massachusetts, Florida, Louisiana, South Carolina, Georgia, Tennessee, Kentucky and Arkansas. Even though human trafficking is generally assumed to be concentrated in large cities, Raymond and Hughes argued, depending on the demand, it can also be present in rural areas such as rural prostitution establishments accessible to the migrant farm workers in Florida. This also indicates that trafficking networks are quite responsive to the demand through moving victims across urban and rural locations and also establishing clubs, massage parlors, escort services, and brothels in such places (p.23).

In a study of 40 trafficked women working as prostitutes in Tapachula, Mexico, Acharya (2004) reported that as a result of prevailing poverty and internal displacements in the region, especially the young women are trafficked from rural areas to local cities and to other big, urban centers in Mexico such as Mexico City, Cancun, Acapulco and Ciudad Juarez to work as prostitutes, table-dancers and barmaids. Some of those victims are also trafficked to the U.S. and Canada. While the people attempt to migrate to the city to escape from poverty, Acharya argued, they become vulnerable to traffickers as they

are not familiar with the urban environment and get lured into false promises of employment and shelter in the city. There are also young women who are voluntarily sold to the traffickers by their parents because of poverty.

The second report on trafficking to, from, and through South Eastern Europe (Surtees, 2005) by IOM (which is also called 'Regional Clearing Point') includes information about a total of 6,125 victims identified and assisted in the region between 2000 and 2004. While poverty and unemployment in the countries of origin are mentioned as driving forces of human trafficking, this report also supported the argument about the concentration of trafficking markets in major cities based on the information about origin and destination countries of assisted victims. That is, unlike the common perception that considers young women from the rural areas as the most vulnerable category to trafficking situations, most of the victims from different countries (i.e., Ukraine, Moldova, Bulgaria) in the region were trafficked to and from urban locations. In their 2004 report on EU-Enlargement, Migration, and Trafficking in Women in South Eastern Europe, Straubhaar, Mayer, Hefeker, Lammers, Wohlers (2004) indicated that poverty, unemployment, ethnic heterogeneity, and lack of private (family) control at home were related to the victimization of women in different parts of Europe. Based on the profiles of trafficking victims helped within the region, Straubhaar et al. (2004) concluded that urban areas are more likely to be exploited by the traffickers as these locations are characterized by a lower degree of social control compared to small communities and villages (p.50). Moreover, competition for opportunities of success is also severe in urban locations. In smaller communities and villages, on the other hand, the people are less likely to break community norms.

As far as human trafficking in Turkey is concerned, Istanbul, the largest and most industrialized city in the country, is the major destination of human trafficking followed by other large urban and tourism centers such as Antalya, Ankara, and Izmir. Attracting international and internal population movements (Erder and Kaska, 2003), Istanbul hosts large numbers of locals and foreigners that are willing to work and trade in an informal economic environment. Even though irregular immigrants those who cannot qualify or afford for formal employment could benefit from this informal economy, the lack of formal guardianship and control, on the other hand, creates an environment in which deception and exploitation could flourish easily. According to a 2003 report on human trafficking in Turkey, Istanbul has the largest number of illegal migration related deportations from Turkey which mostly involves migrant prostitutes. Geographic proximity to the countries of origin also seems to be relevant in Turkey as the deportations of Georgians are quite low in Istanbul but high in Trabzon which is relatively closer to the Georgian border. Although the police were used to apprehend immigrant prostitutes during their regular controls in the city, with the advent of enhanced communication and transportation, migrant prostitution and recruitment of trafficking victims into prostitution spread into the areas surrounding the urban locations in the city in recent years (Erder and Kaska, 2003, 47).

Apparently, poverty and unemployment especially in developing countries and related instability and internal rural-urban as well as international migration of the people make them vulnerable to trafficking situations with fake job and employment promises. As for the distribution of human trafficking in a country, traffickers generally target major urban centers that provide more customers and are closer to the source countries or

both. Once the exploitation of trafficking victims gets started in a location, it also penetrates into neighboring communities depending on the demand and reaction of the local enforcement and community over time. Evidence from Ukraine also indicates a similar diffusion of human trafficking into smaller areas as regard to the recruitment of victims from the countries of origin. That is, while the victims were recruited from the cities in the early years, the recruiters in Ukraine are now moving into the countryside to small towns and villages to recruit women into exploitation (Hughes and Denisova, 2001; Pyshchulina, 2007).

According to Hughes and Denisova (2001), traffickers target the regions and cities based on the ease with which they can prey on the victims. As long as trafficking in women for the purposes of sexual exploitation is concerned, "...countries and cities where there are large sex industry centers and where prostitution is legal or widely tolerated" are more likely to be exploited by the traffickers (Hughes 2001, 13). Legalization of prostitution, pimping, and brothels, Hughes argued, causes an increase in trafficking in order to meet the demand driven by legitimized sex industry. Moreover, when prostitution is legal, the dilemma of voluntary versus forced prostitution creates problems in terms of prosecution of the traffickers as law enforcement is expected to prove that the women did not consent. From a criminological stand point, however, even if prostitution is formally prohibited, an existing informal tolerance or demand for prostitution would still increase trafficking in a given community as prostitution is regarded as a sign of physical and social disorder in that community. The following section reviews prostitution as a sign of demand and social disorder and discusses the impact of prostitution on the spatial distribution of human trafficking.

3. The Impact of Prostitution on the Distribution of Human Trafficking

Studies on social disorder and disorganization suggested a close relationship between physical and social disorder and more serious crimes in a community as explained in the prior chapter. Empirical evidence demonstrated that disorder has direct and indirect impact on more serious crime. Simply put, while poverty or low SES, ethnic heterogeneity, family disruption, and residential instability increase disorder, disorder directly or indirectly (through increased fear and/or reduced cohesion) increases serious crime (Markowitz et al., 2001; Skogan, 1990; Wilson and Kelling, 1982; Xu, Fiedler, and Flaming, 2005). Even though aggregate level perceptive measures of physical and social disorder have been subject to substantial scientific inquiry, the relationship between more specific and reactive indicators of disorder and serious crime haven't been paid much attention except only one study that looked at the relationship between street level drug hot spots and serious crimes in Jersey City (Weisburd and Green-Mazorelle, 2000).

Skogan's (1990) research in forty neighborhoods across six different U.S. cities indicated that as a sign of both social and physical disorder, prostitution is likely to be linked to more serious crime in the community. Moreover, disorder had relatively more impact on crime compared to poverty, instability, and heterogeneity. In this regard, considering the strong link between prostitution and human trafficking (Davis, 2000; Ekberg, 2004; Farley and Barkan, 1998; Hughes, 2002; Schauer and Wheaton, 2006; Thukral, 2005) in terms of involved risks, the services both offer, and the people they benefit (males-johns, pimps, traffickers), an existing demand and tolerance for prostitution might be more likely to give rise to human trafficking in the city/community. Moreover, former victims' involvement in the victimization of others in order to avoid

reprisals from the traffickers may also fuel the continuance of human trafficking in that community (Altink, 1995). Finally, a presumed association between prostitution and human trafficking based on social disorder perspective would also help to better address ongoing debate in human trafficking literature as to whether (existing demand for) prostitution leads to trafficking or trafficking creates its own market.

To the extent that prostitution underlies an existing social disorder and lack of control in a given community, like other indicators of social and physical disorder, prostitution can also account for the variation of human trafficking and other serious types of crime across time and place. Since the traffickers are assumed to select their destinations through market testing and establish their businesses where the reaction from the public and law enforcement are relatively weak (Kelly, 2002; Straubhaar et al., 2004), prevailing social disorganization and disorder would provide a conducive context for trafficking situations, for the communities with social disorganization and disorder would not be able to resist the establishment and diffusion of illegal markets.

Motivated/likely offenders are also attracted to disorganized areas with social and physical disorder because of the opportunities they offer (Skogan, 1990; Wilson and Keling, 1982). In case of sexual exploitation of trafficking victims, both traffickers and customers of their services and all other elements of the illegal market of human trafficking in that community (i.e., place managers) will be free of informal social control without the regulative capacity of a disorganized and disordered neighborhood. Furthermore, it is also argued that if local small prostitution rings become connected to larger organized crime groups, they can also serve as an entrance point for organized crime into that city or country since trafficking in women is claimed to be intertwined

with other related criminal activities (Hughes, 2001; Hurriyet, 2007; O'Neill, 1999; UNODC, 2006).

Cohen's (1980) study on prostitution in New York City demonstrated that population density, heterogeneity, and related anonymity (Cohen, 1980, 117) on the part of both providers and customers of the illegal sex market contribute to emergence and perpetuation of prostitution in a given context. Simon and Gagnon (1973) found that many men are more likely to buy sex when social control over them is loosened (i.e., away from home). Browning and Wilbon (2003) also found that short term sexual partnering practices were more likely to occur among the people living in disorganized neighborhoods because of either weak social ties or of strong social ties with weak collective efficacy. As for human trafficking, Leuchtag (1995) contends that the women are sold or rented to affluent men who use anonymity to buy sex. As far as residential stability is concerned, Cohen (1980) and Skogan (1990) concur that prostitution and related services may be more likely to emerge in relatively stable parts of the city to attract more customers without concerns about personal safety. Even if prostitution does emerge in the slums or in the zone of transition, it is expected to border on stable commercial areas to diminish the risk of intimidation by others (Cohen, 1980, 121). Moreover, police's or public officials political will to confine prostitution to a certain (red light) district can also attenuate the predictive power of residential stability, for prostitution is mainly pushed into non residential areas which is sometimes done through negative zoning regulations (Mathews, 2005).

In the first human trafficking report of Turkey, Erder and Kaska (2003) supported the relevance of Cohen and Skogan's argument as regard to the relationship between

community structural characteristics and prostitution when they articulate the emergence of immigrant prostitution and human trafficking in Laleli -one of the districts of Istanbul that is famous for migrant prostitution and human trafficking-. As the researchers indicated, while the district was a well known historical and residential area until the 1950s, with the advent of an official policy favoring tourism beginning in the 1960s, it turned into a tourism center. Following the collapse of the former Soviet Union, however, the district became a commercial center where internal and international immigrants met each other in the course of newly emerged informal economy that was called "suitcase trade" in the early 1990s (see also Yukseker, 2004). Economic development in Laleli was also accompanied by fundamental social changes. That is, while middle class families who could afford to leave the area deserted Laleli during that transformation process, a transitional zone simultaneously emerged which is mainly comprised of irregular foreign migrants and poor internal immigrants who live in lower class rental blocks surrounding Laleli. Today, Laleli is well known for its hotels, malls, restaurants, nightclubs, bars and it is also one of the most important hot spots of migrant prostitution and human trafficking in Turkey.

While social disorganization and lack of social control in the community creates a conducive context for prostitution to flourish, normalization and legalization of prostitution in the community, Hughes (2001) argued, increase men's demand for such services. This demand, on the other hand, is met through increased recruitment of women and girls into prostitution which usually involves violence, deception or exploitation of those who suffer from poverty, unemployment, and prior victimization (Hughes, 2001). Put differently, trafficking in women for the purposes of sexual exploitation is driven by

men's demand for their services and the demand is increased and normalized by the presence of prostitution in a given context. Thus, while social disorganization would lead to more prostitution in a community, prevailing prostitution, on the other hand, would fuel the demand for sexual services through the normalization of prostitution and this would drive trafficking in women to meet the demand in that community.

Current research on human trafficking by international migration scholars already indicates simultaneous emergence and continuance of migrant prostitution and human trafficking (for the purposes of sexual exploitation) in different parts of the world such as the U.S., Italy, Spain, Turkey, Greece, Norway, and Korea (Agustin 2005; Brunovskis and Tyldum, 2004; Dong-Hoon, 2004; Erder and Kaska, 2003; Fergus, 2005; Gulcur and Ilkkaracan, 2002; Kelly, 2005a; Lazaridis, 2001; Schauer and Wheaton, 2006). The U.S. government also insists that prostitution and human trafficking are inextricably linked by stating "Where prostitution is legalized or tolerated, there is a greater demand for human trafficking victims and nearly always an increase in the number of women and children trafficked into commercial sex slavery " (United States Department of State, 2005, 19).

Exploring the results from two decades of legalization of brothel prostitution in the state of Victoria, Australia, Sullivan and Jeffreys (2002) concluded that although legalization was intended to minimize the harm in prostitution, related crimes, and to control the expansion of the industry, that it conversely caused an increase in trafficking of girls and women into Victoria to meet the increased demand within expanding and profitable sex industry. Though the number of legal brothels were doubled following the legalization of prostitution in Victoria, the researchers said, there are three times as many illegal brothels as the legal ones. As regard to the functional distribution of trafficking

markets, the researchers asserted that traffickers seem to operate where there are brothels to place their goods without fear and harassment and thus legalization is perceived by the traffickers as a signal that shows them where they can develop their business. Simply put "For trafficking to occur there must exist in the destination country an economic context in which enslaved workers can be exploited and a social context that allows treating human beings in this way" (Bales, 2005, 156).

Overall, social disorganization and disorder lead to increased prostitution and human trafficking in the community as much as they would drive other violent and property crimes mainly because of the inability of the community to regulate and control the behavior of its residents and visitors. Prostitution, on the other hand, further increases human trafficking both as a sign of increased disorder and demand in a given context. As the traffickers are attracted to these locations along with other criminals, trafficked victims are also forced into other types of crimes such as pick-pocketing, car theft, drug smuggling or begging besides prostitution (Bales and Lize, 2005). As a sign of community disorder, increased prostitution in the community is also considered to be related to an increase in other types of crimes. Law enforcement officers in the city of Vyborg in St Petersburg indicated that as the city became a site for prostitution tourism for Finnish men, there has been an increase in the robbery of Finnish men and murders among rival prostitution gangs (Hughes, 2002). Even in the case of legal prostitution, the lack of social control would lead to exploitation of prostituted women as much as it would lead to other violent and property crimes. Of 854 people surveyed in a study of prostitution in nine different countries including Canada, Colombia, Germany, Mexico, South Africa, Thailand, Turkey, United States, and Zambia; 71 percent were exposed to

physical assaults in prostitution and 62 percent reported rapes in prostitution. Moreover, 59 percent of the women working in legal brothels of Germany indicated that legal prostitution does not make them any safer from rape and physical assault (Farley, Cotton, et al., 2004). Nevada, which is the only state with legal prostitution in 13 of its counties, is also contended to have significantly higher rates of sex crimes than all other states in the U.S. in 1990s (Albert, 2001).

CHAPTER FOUR

METHODOLOGY

The purpose of this chapter is to clarify research questions and to specify a series of research hypotheses to be tested based on the theoretical frames provided in the previous chapter. Moreover, detailed information about two different data sets and the operationalization of the variables is provided. Finally, an overview of the analytic strategies that will be employed is also included in this chapter. Given that two independent datasets are going to be analyzed with regard to cross-national and national distribution of human trafficking, related hypotheses and operationalization of the variables are specified accordingly.

1. Research Questions and Hypotheses

(1) How do macro-level structural characteristics influence the cross-national distribution of human trafficking?

Migration system theory conceptualizes the migratory process as embedded in broader social and economic changes which increase the interconnectedness across the world nations especially based on economic development in the process of globalization. Trafficking markets, on the other hand, are expected to prey on the vulnerability of those who cannot afford or qualify for the services of formal recruiting agents in the development process. Thus, the nations in the process of economic development are supposed to be exploited more by the traffickers as economic growth in certain parts of a country such as in global or primate cities would fuel both internal and international migration and thus increase the number of vulnerable targets of the trafficking markets. As the evidence demonstrated, as far as a crossection of such movements in and across

the nations is concerned, developing countries are likely to have more incidents of human trafficking mainly because of ongoing rural-urban and international migration and related social and economic transformations (Bales, 2005; Laczko et al., 2002; Straubhaar, Mayer, Hefeker, Lammers, and Wohlers, 2004).

More specifically, structural changes such as shifts in urbanization and political economy might break formal and informal social controls in the process of development (Howard et al, 2000). That is, political-economic shifts that redirect the distribution of public resources and jobs and services definitely impact social cohesion in a community (Bursik, 1988; Bursik and Grasmick, 1993). Thus, social disorganization theory can be applied to substantiate the contextual factors which contribute to vulnerability of trafficking victims in a given country as it also attributes higher crime rates in a nation to a breakdown in formal and informal controls. Social disorganization theory suggests that increased poverty, instability, heterogeneity, family disruption, and urbanization in an area, including a nation, produce illegitimate opportunity structures and dysfunctional lifestyles including violence and crime.

Although Shaw and McKay's (1972) original social disorganization model has been subjected to significant revisions in terms of consideration of the factors which mediate between the structural characteristics and crime and/or victimization rates, the social disorganization perspective still seems to be worth exploring given substantial empirical evidence indicating the ability of contextual factors to explain the spatial distribution of crime/victimization rates at neighborhood, city, and state level (Kennedy, Silverman, and Forde, 1991; Parker, 1989; Parker, McCall and Land, 1999; Rose and McClain 1998; Sampson and Groves, 1989; Sampson et al., 1997; Smith et al., 2000).

Even though we are not living in Durkheim's France or postwar US and/or city of Chicago today, similar to the impact of modernization/industrialization; globalization and related transformations and mobilization of goods and services have an impact on social integration and cohesion through increased population, mobility/immigration, heterogeneity, weak governance/governmental corruption, and poverty in the both ends of such movements, especially in developing countries of the world (Bales and Lize, 2005; Castles, 2000; Coleman, 2003) . There are also plenty of studies which incorporate the concepts of the social disorganization perspective (i.e., as control variables) into the analysis of cross-national distribution of both violent and property crimes (i.e., Avison and Loring, 1986; Braithwaite and Braithwaite, 1980; Gartner, Baker, and Pampel, 1990; Gartner, 1990; Krahn, Hartnagel, and Gartrell, 1986; Messner, 1989; Neapolitan, 1994; Ortega, Corzine, Burnett, and Poyer, 1992; Rosenfeld and Messner, 1991).

As far as human trafficking is concerned, several qualitative studies and country reports on human trafficking have reported adverse effects of *globalization of transportation, markets, labor* (Kelly, 2005a), and related impact of *poverty, economic desperation and disadvantage* (Raymond and Hughes, 2001; Brunovskis and Tyldum, 2004; Ahmad 2005; US Department of State, 2006); *family breakdown and abusive relationships* (Acharya, 2006; Boontinand, 2005; Chaikin, 2006; Shelley, 2002; Sulaimanova, 2005;); *feminization of poverty and migration* (Castles and Miller, 2003; Dong-Hoon, 2004; Jagori, 2005; Kofman, 1999); *ethnic conflict and dislocations* (Kelly, 2005; Kelly, 2005a); *lack of political willingness, corruption, and weak governance* (Kelly 2005a; Shelley, 2002) on the emergence of the contemporary human trafficking problem. Thus, research already indicates the impact of globalization related breakdown

in formal and informal social controls on the emergence and continuance of human trafficking markets in different parts of the world.

Therefore, fueled by the differential impact of globalization on the structural characteristics of the world nations, human trafficking is hypothesized to have emerged as a result of the inability of world nations to regulate the behavior of their residents and visitors because of lack of formal and informal social controls (i.e. private, parochial, and public controls: Bursik and Grasmick, 1993). Accordingly, the following relationships are hypothesized:

H_{1a}: Poverty will have positive impact on human trafficking in a country.

H_{1b}: Heterogeneity will have positive impact on human trafficking in a country.

H_{1c}: Residential mobility will have positive impact on human trafficking in a country.

H_{1d}: Urbanization will have positive impact on human trafficking in a country.

H_{1e}: Family disruption will have positive impact on human trafficking in a country.

H_{1f}: The size of total population will have positive impact on human trafficking in a country

(2) How do hierarchical diffusion and social disorganization influence trafficking in women in Turkey?

Rengert's (1996) application of diffusion principles to the study of illegal drug markets in the United States lends significant evidence as to impact of population and proximity to the places where illegal drugs are produced and exported on the spatial

distribution of illegal drug markets in a given area, whether it be a neighborhood, a city, a state, or even a region. Socially disorganized communities, on the other hand, are also found to be the favorite destinations of illegal markets, as these communities provide a convenient context for illegal transactions and services because of the lack of formal and informal social controls.

More recent studies have also pointed to the diffusion of property and violent crimes as well as drug use (Frischer, Anderson, Hickman, and Heatlie, 2002; Rice and Smith, 2002; Smith et al., 2000). Messner, Anselin, Baller, Hawkins, Deane, and Tolnay (1999) investigated spatial patterning of county homicide rates across 78 counties in and around the St. Louis metropolitan area and they found evidence of hierarchical and contagious diffusion of homicides from the urban core of St.Louis to smaller urban areas overtime. Cohen and Tita (1999) also examined homicides among youth gangs across the neighborhoods in the city of Pittsburg and they found evidence for contagious diffusion of youth-gang homicides into adjoining neighborhoods in the city. Frischer et al. (2002) used individual surveys to analyze the diffusion of drug use in Scotland between 1993 and 1996 and found significant evidence of drug use diffusion in accordance with the town size and the proximity of the places to where a certain type of the drug is exported or produced.

Given empirical evidence about crime diffusion and the similarities between human trafficking and illegal drug markets as regard to their structural and functional features, and also considering simultaneous involvement of some criminal networks in both human and drug trafficking (Hurriyet, 2007; Raymond and Hughes, 2001; Shelley, 2003), human trafficking markets are also expected to concentrate in large cities because

of the large number of available customers in a relatively more anonymous environment. Moreover, socially disorganized cities would be more attractive targets for human trafficking markets as they won't be able to regulate the behavior of their residents and visitors and thus create an unthreatening environment for both owners and customers of human trafficking markets.

In sum, human trafficking markets are expected to follow a similar trend as illegal drug markets in terms of their spatial distribution across different regions and/or cities in a country. A crossection of such trends in a country could only provide evidence for hierarchical diffusion in place but not time. In other words, with crossectional information about human trafficking markets in a country, it is not possible to focus on spatial contagion (or expansion diffusion) and network diffusion as this would require longitudinal data. However, given that expansion and network diffusion involve radial spread from a hierarchically infected geographic epicenter into nearby communities, a crossectional analysis of the diffusion of illegal markets can still produce information about hierarchical diffusion and the impact of social disorganization on this diffusion. Accordingly, the following relationships are hypothesized:

Hierarchical diffusion:

H_{2a}: The cities with more population will have more human trafficking incidents.

H_{2b}: The cities with international border gates will have more human trafficking incidents.

Social disorganization:

H_{2c}: The cities with more poverty will have more human trafficking incidents.

H_{2d}: The cities with more heterogeneity will have more human trafficking incidents.

H_{2e}: The cities with more residential mobility will have more human trafficking incidents.

H_{2f}: The cities with more urbanization will have more human trafficking incidents.

H_{2g}: The cities with more family disruption will have more human trafficking incidents.

(3) What is the impact of migrant prostitution on the distribution of human trafficking and violent and property crimes?

Evidence showed that social and physical disorder have quite significant direct and indirect impact on more serious crimes (Markowitz et al., 2001; Skogan, 1990; Wilson and Kelling, 1982; Xu, Fiedler, and Flaming, 2005). As a result of ongoing social disorganization and lack of control in a community, social disorder is suggested to have stronger impact on crime than do poverty, instability, and heterogeneity. In this respect, as a sign of physical and social disorder, prostitution is also linked to more serious crime in a community (Skogan, 1990). Even though disorder is generally measured based on perceptive and objective measures of social and physical disorder in a community, some other researchers also used official indicators (i.e., drug arrests, emergency calls for service for narcotics, police arrests for vandalism, drunk driving, and other disorderly behavior) to identify drug hot spots and to examine the relationship between drug hot

spots, disorder, and more serious crime (in Jersey City, Weisburd and Green-Mazorelle, 2000).

Despite the limited evidence as to the individual impact of prostitution on more serious crime, the relationship between prostitution and human trafficking has been entertained for sometime by researchers (Brunovskis and Tyldum, 2004; Ekberg, 2004; Erder and Kaska, 2003; Hughes, 2002; Lazaridis, 2001; Schauer and Wheaton, 2006). While the impact of tolerance and demand for prostitution on increased incidents of human trafficking is documented in different parts of the world (Sullivan and Jeffreys, 2002), prostitution is also claimed to be linked to an increase in other types of crime and disorder such as pick-pocketing, car theft, drug smuggling, begging, robbery, and homicides by involving the women, their customers, or rival gangs and traffickers as offenders and victims of these various types of crimes (Bales and Lize, 2005; Hughes, 2002) -even if prostitution is legal in a specific community or country-(Albert, 2001).

Overall, based on the evidence regarding the association between prevailing social disorganization and disorder in a community, and considering the link between social disorder and more serious crimes, following relationships as to trafficking in women in Turkey are hypothesized:

Social disorganization and Prostitution:

H_{3a}: The cities with more poverty will have more illegal prostitution.

H_{3b}: The cities with more heterogeneity will have more illegal prostitution.

H_{3c}: The cities with more residential mobility will have more illegal

prostitution.

H_{3d}: The cities with more urbanization will have more illegal prostitution.

H_{3e}: The cities with more family disruption will have more illegal prostitution.

Prostitution and human trafficking markets and other serious crimes:

H_{3f}: The cities with illegal prostitution will have more human trafficking incidents in the following year.

H_{3g}: The cities with illegal prostitution will have more property crime in a given year.

H_{3h}: The cities with illegal prostitution will have more violent crime in a given year.

H_{3i}: The cities with illegal prostitution will have higher overall crime rates in a given year.

H_{3j}: The cities with illegal prostitution will have higher overall crime rates in the following year.

H_{3k}: The cities with illegal prostitution will have higher organized crime rates in the following year.

2. Data

To explore the spatial distribution of human trafficking at global and national level, data are collected from three main independent sources. These data include: 1) The United Nations databases on social, demographic and economic development of the

world nations 2) Census data and 3) Official police crime records. More detailed information about the collection of the data; operationalization and measurement of the concepts are provided in the following subsections.

(1) The United Nations Database

A sample of 53 countries providing the most relevant and reliable information on specified independent variables in accordance with hypothesized relationships has been selected to analyze cross-national distribution of human trafficking. Although the information about the dependent variable is available for 111 countries, information on independent and control variables is available for only 53 nations. In order to be able to collect consistent information across different countries, almost all the information regarding independent variables is retrieved from various databases of the United Nations. The dependent variable, on the other hand, is constructed based on the modification of Bales' (2005, 183-186) measurement of human trafficking across 111 different countries as explained in detail in the following subsection on measurement procedures.

Acknowledging that population trends are inextricably linked with the availability of resources, the state of environment, and economic and social development, the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat has produced the PRED database, drawing on a variety of national-level comparative data and documents dealing with aspects of population, resources, environment and development[1]. While assembling the cross-national database for the analysis of global distribution of human trafficking, information about the nations'

[1] PRED database is available at http://unstats.un.org/pop/Home.aspx

poverty, urbanization, annual population growth rate, heterogeneity and *population* is retrieved from PRED database.

The same division of the UN also provides panel data on world population prospects between 1950 and 2050[2]. Information about one of the control variables, that is, the proportion of the nations' *population at the age of 15-24,* is retrieved from this database. Information as regard to *divorce rates* comes from the United Nations Demographic Year Book 2000 and 2003. The United Nations Demographic Yearbook collects, compiles and disseminates official statistics on a wide range of topics including marriage and divorce on an annual basis since 1948[3]. Finally, information on the *gini index* of inequality of the nations obtained from the UN Human development report 2005. The measures of all these variables are based on the information provided by the countries in the year 2000; yet, for a small number of nations that had missing information for unemployment and divorce rates for the year 2000, information from the preceding years was used (all on or after 1995).

(2) Census data and crime statistics

Census data and official crime statistics are utilized to examine trafficking in women in Turkey. Turkey is comprised of 81 provinces and has a national police organization (TNP) serving in each of the 81 cities with a provincial head quarter and personnel. Accordingly, statistical information about social and demographic characteristics of these cities is obtained from Turkish Statistical Institute (TURKSTAT). Crime statistics regarding the distribution of human trafficking markets and property and violent crimes across cities are retrieved from annual crime statistics produced by the

[2] see http://esa.un.org/unpp/index.asp?panel=2
[3] see http://unstats.un.org/unsd/demographic/products/dyb/default.htm

Turkish National Police. In addition to official crime statistics, the general directorate of Turkish National Police also provides information about the number of international border gates across 81 cities.

Census data include social, economic, and demographic information about the cities in the year 2000. Crime statistics, on the other hand, include annual statistics regarding the incidents of human trafficking in 2006, homicides in 2003, burglaries in 2003; deportations of the immigrant women because of their involvement in prostitution in 2003; public order crime rates in 2005, and finally, organized crime rates in 2005. Turkish National Police produces different statistics for terror related, drug related, organized, and for what is called "public order" crimes. Similar to the index crimes in the United States, public order crimes include both violent crimes of murder, rape, robbery and aggravated assault; and the property crimes of burglary, larceny, and motor vehicle theft in Turkey. Organized crime incidents, on the other hand, consist of crime incidents that were committed by organized crime groups.

In sum, census data are going to provide information about structural antecedents of social disorganization in a city-which constitutes the social context for the analysis of trafficking in women in Turkey. Crime data, on the other hand, include annual crime rates that will help to explore the diffusion of human trafficking markets across the cities and to investigate the impact of social disorganization and migrant prostitution on the distribution of human trafficking markets and provincial crime rates.

3. Measurement of the concepts

(1) Cross-national analysis of human trafficking

Dependent Variable:

Human trafficking:

Bales (2005) has been the first researcher who measured human trafficking at the cross-national level. In order to identify significant predictors of 'human trafficking from' and 'human trafficking to' a country, Bales (2005) created two separate dependent variables for human trafficking from and to a country. Using a systematic protocol, Bales (2005, 96) retrieved information on human trafficking from multiple physical and electronic records including reports by national governments, reports by international organizations, reports by experts, reports by non-governmental organizations, press reports, and his ethnographic fieldwork in five countries (Bales, 2004). Then, he assigned two different points for each country on a 5 point ordinal scale -which ranges from '0' to '4' (0= no trafficking to 1=rare cases of trafficking, 2=occasional but persistent case of trafficking, 3=regular cases of trafficking in small numbers, 4= regular cases of trafficking in large numbers) and indicates the level of human trafficking to and from a country. To increase the validity and reliability of his estimates, Bales (2005) had several anonymous experts with personal knowledge on each country review his estimates and refined the country scores in accordance with the suggestions of the experts.

Although Bales (2005, 128-129) adapted the United Nation's definition of human trafficking, he operationalized human trafficking in a country through two separate measures, that is, human trafficking to and from a country. However, the United Nations defined human trafficking as:

> (a) "Trafficking in persons" shall mean the recruitment, transportation, transfer, harboring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the

> purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude or the removal of organs;
> (b) The consent of a victim of trafficking in persons to the intended exploitation set forth in subparagraph (a) of this article shall be irrelevant where any of the means set forth in subparagraph (a) have been used;
> (c) The recruitment, transportation, transfer, harboring or receipt of a child for the purpose of exploitation shall be considered "trafficking in persons" even if this does not involve any of the means set forth in subparagraph (a) of this article;
> (d) "Child" shall mean any person under eighteen years of age (Article 3).

Hence, given the major elements of human trafficking enumerated in the first paragraph (a), human trafficking in a country should involve both trafficking 'to' and 'from' a country as the definition of trafficking embraces recruitment and exploitation as well as different means to do both as vital elements of human trafficking. Thus, when talking about the spatial distribution of human trafficking markets, one should consider both recruitment and exploitation of the trafficking victims in a country as major indicators of the active presence of these markets. In fact, evidence provided in the previous chapter also demonstrated that there are several regions and countries which serve as favorite origin and destination points of human trafficking simultaneously (Kangaspunta, 2003; UNODC, 2006). Moreover, a separated focus on trafficking from and to a country might also fail to consider internal trafficking in a country as well (Bales and Lize, 2005; ICMPD, 2005).

In this respect, considering the definition of trafficking by the United Nations as involving both recruitment and exploitation, and given the empirical evidence as regard to the existence of recruitment and exploitation in the same countries, human trafficking in a country should better include the measures of both human trafficking from and to that country. Therefore, in the analysis of cross-national distribution of human trafficking across 53 countries, human trafficking in a country will mean an aggregated measure of

both human trafficking to and from a country. Exploratory factor analysis for Bales' (2005) two items showed that these items were associated with a single latent construct (Factor loadings > .85, explained variance= 72.50, eigenvalue= 1.45). Moreover, the magnitude of internal consistency (Cronbach's Alpha= .62) indicates an acceptable level of reliability among the items (Cohen and Cohen, 1983). Thus, human trafficking in a country, the dependent variable, is operationalized as a factor based additive scale which simply combines Bales' (2005) five point human trafficking to- and -from items and ranges from 1 to 8.

Independent variables:

Poverty:

As reviewed studies and reports on human trafficking have concurred, compared to developed countries, developing nations are more likely to struggle with human trafficking as both origin and destination points mainly because of poverty and lack of employment opportunities -which creates a conducive context for the traffickers to prey on those who want to leave for better opportunities but can't afford or qualify. While testing the impact of poverty on cross-national distribution of crime, researchers generally employ a Gross Domestic Product (GDP) or Gross National Product (GNP) per capita measure, as an indicator of development and average income in a country (Bennett and Bennett, 1983; Braithwaite and Braithwaite, 1980; Gartner , 1990; Howard, Newman, and Pridemore, 2000, 156). In addition to serving as an indicator of poverty and development, GDP is also considered as "...a proxy for the quality of government institutions, including the police and justice systems" (Lederman, Loayza, and Menendez, 2002). Previous studies demonstrated that per capita GDP or GNP are negatively

associated with cross-national homicide rates, that is, as per capita GDP or GNP increases, homicide rates tend to decrease (Fajnzylber, Lederman, and Loayza, 2002; Ledermen et al., 2002; Neapolitan, 1994). Similarly, GDP per capita for the year 2000, which refers to GDP (at constant U.S. dollars) divided by total population, is used to measure the impact of poverty and level of development on cross-national distribution of human trafficking. The measure of GDP per capita in the year 2000 is retrieved from the UN PRED database.

Urbanization:

Urbanization is considered as a key component in the process of social change (Simpson and Conklin, 1989) and shifts in urbanization are suggested to break the normative controls in the society (Howard et al., 2000). As far as human trafficking is concerned, development and related urbanization especially in developing countries would benefit traffickers in terms of targeting those who look for employment opportunities and exploiting them in an unguarded urban social environment. Urbanization is generally measured as the percentage of the population living in urban areas (Krahn, Hartnagel, and Gartrell, 1986; Messner, 1989) and it was found to have significant impact on crossnational distribution of violent crime (Conklin and Simpson, 1985, cited in Messner, 1989). Hence, the percentage of the population living in urban areas in 2000 as indicated by the UN PRED database is used as a measure of urbanization across the countries.

Heterogeneity:

It is suggested that people might be reluctant /less inclined to guard or care about the personal safety and private property of their neighbors they barely know or contact

(Howard et al., 2000). Previous research indicated significant positive impact of ethnic and linguistic heterogeneity on violent crimes (Conklin and Simpson, 1985; Gartner, 1990). In this regard, heterogeneity is expected to increase the incidents of human trafficking in a country mainly because of weak community ties and decreased level of social control over the establishment and activities of human trafficking markets. Prior research generally employed different ethnolinguistic homogeneity indices (Messner, 1989; Li, 1995; Neapolitan 1998) as a measure of ethnic or linguistic heterogeneity. Acknowledging that heterogeneity mainly refers to ethnic and linguistic differentiation and given that human trafficking mainly involves the exploitation of the victims in a foreign country, the percentage of the foreign-borns in the population is used as a measure of heterogeneity (Gartner 1990, 97; Howard et al., 2000, 158) and information about both total and foreign-born population is retrieved from the UN PRED database.

Residential Mobility:

Like urbanization, residential mobility also leads to weaker community ties and relatively weak social control as the people would be less likely to know each other in the areas of massive population turmoil. At cross-national level, total population growth rate is suggested as a cursor for residential mobility (Howard et al., 2000) and prior research demonstrated significant positive effect of total population growth rate on crossnational violent crime rates (Krahn et al., 1986; Li, 1995). Human trafficking markets are also expected to benefit from prevailing instability across a country as increased mobility would decrease the ability of the communities to resist and control illegal markets' penetration into their proximal social environment. The UN PRED database also provides

national population growth rates, and total population growth rates of the nations between the years of 1995 and 2000 are employed as a measure of residential mobility.

Family Disruption:

Generally operationalized as a nation's divorce rate (Simpson and Conklin, 1989; Howard et al., 2000), family disruption is another factor that disrupts social cohesion and integration (Sampson, Raudenbush, and Earls, 1997). Thus, family disruption could contribute to diffusion of human trafficking markets by reducing the control of both offending and victimization. Prior research has already pointed to family disruption as a significant predictor of increased violent crime rates across the nations (Gartner, 1990). The UN Demographic Year Book 2000 and 2003 (United Nations, 2006) are used to operationalize family disruption as the rate of nations' divorce rate per 1000 in the year 2000. Information about divorce rates of two nations, that is, Thailand and Sri Lanka, is not available in these year books and this information is obtained from Gulnar Nugman (2002) of the Heritage Foundation. The same information was also used by other researchers before (Rahman, Mittelhammer, and Wandschneider, 2003).

Total Population:

Although total population of a country is generally employed as a control variable in cross-national analysis of crime rates, it is also considered as an important factor that could undermine social integration and encourage anonymity (Rosenfeld and Messner, 1991). In this respect, a large population, especially when accompanied by poverty and urbanization in developing countries, would contribute to establishment of human trafficking markets because of lack of control and increased number of suitable targets.

The measure of total population in a country in the year 2000 comes from the UN PRED database.

Control Variables:

In addition to poverty, urbanization and indicators of social disorganization enumerated above; two control variables are going to be employed as control variables for the analysis of cross-national distribution of human trafficking.

Income Inequality (Gini):

Prior research indicated significant impact of income inequality as opposed to absolute poverty on cross-national distribution of crime rates (Gartner, 1990; Lederman et al., 2002; Messner, 1989). Income inequality is generally operationalized as the gini index of a country. The Gini coefficient ranges from 0 to 100, with 0 indicating perfect equality and 100 indicating perfect inequality within a population (Howard et al., 2000). Information about each country's gini coefficient in the year 2000 is obtained from the UN Human Development Report 2005.

Population Aged 15-24:

The proportion of younger population aged between 15 and 24 is another common control variable used in cross-national analysis of crime. However, the relationship between this control variable and international crime rates is not clear yet. That is, whereas some researchers found a significant positive relationship (Ortega et al., 1992), others found either negative (Bennett, 1991) or nonsignificant relationship (Neapolitan, 1994). Information about the proportion of the population aged between 15 and 24 in 2000 is retrieved from the UN database on world population prospects.

(2) Trafficking in women in Turkey

Dependent variables

Human Trafficking:

Turkey has ratified the afore mentioned United Nations Convention (2000) against Transnational Organized Crime and its additional Protocol to Prevent, Suppress and Punish Trafficking, Especially Women and Children in 2003, and incorporated almost the same definition of human trafficking into the Turkish Criminal Code (Article 80). Thus, human trafficking is understood in accord with its globally accepted definition by Turkish National Police across 81 cities in Turkey. In practical terms, however, operationalization of human trafficking as a crime is not quite as straight forward as in other type of crimes as indicated by the small number of cases of human trafficking in most cities. In 2006, for example, there were no cases of human trafficking in 58 cities (72%) and only 23 cities (28%) had one or more incidents of human trafficking in the entire year (TNP, 2006). In this regard, following the previous research on the distribution of uncommon crimes in and across the cities (Osgood, 2000; Osgood and Chamber, 2000) the number of human trafficking incidents as identified by the police in the entire year of 2006 is used as a dependent variable for the analysis of the distribution of human trafficking markets in Turkey.

However, given the limitations of secondary data gathered by other people for agency purposes, official police records might underestimate existing human trafficking in a city. Moreover, what events or individuals come to the police attention also depends on the discretion and performance of the police organization as well (Hagan, 2006). Thus, police reported measure of human trafficking might have the confounding impact of

police discretion and performance. Therefore, an alternative measure of the distribution of human trafficking markets, that is, the number of calls for rescue as reported by the International Organization for Migration (IOM) office in Turkey for the entire year of 2006 is also used (IOM, 2006).

IOM office in Turkey has established a hotline called "157 helpline" which is mainly aimed at assisting law enforcement authorities in the rescue of human trafficking victims. Helpline is operated by consultants who are trained in counseling, emergency assistance and sensitive information solicitation. Thus, among several services provided through this helpline (i.e., assisting legal and illegal migrants and awareness raising in the community), consultants also record the calls that are considered as potential cases of human trafficking under the "request for rescue" category of the 157 helpline database. The distribution of these calls (requests for rescue) across the provinces is available in 2006 human trafficking report of Turkey through IOM office's website (www.countertrafficking.org). Simply put, requests for rescue refer to the calls that provide enough information to be considered as a potential case of human trafficking. Given that these calls are made not only by the victims themselves but also by their relatives, friends, neighbors, and customers; and considering the fact that only limited number of these calls result in the identification and rescue of victims in the end, requests for rescue can provide more adequate picture of the distribution of human trafficking markets across the cities. Therefore, in addition to the number of human trafficking incidents reported by police, the number of requests for rescue in each province are also used as another measure of human trafficking across 81 cities in Turkey and they are referred as 'calls for rescue' in the remaining part of this study.

Migrant prostitution:

Prostitution is legal but limited to Turkish women in Turkey, and involvement in prostitution is considered as a reason for immediate deportation for foreigners. Statistics regarding the number of deported women because of their involvement in prostitution in 2003 is provided by the Turkish National Police. Prior research on prostitution, human trafficking, and social disorder suggested a positive relationship between prostitution and human trafficking and prostitution and more serious crime (Bales and Lize, 2005; Skogan, 1990; Sullivan and Jeffreys, 2002). As for the situation in Turkey, like human trafficking, migrant prostitution is also specific to certain cities in Turkey. In 2003, 33 (41%) cities reported no prostitution related deportation, where 8 (10%) cities reported one prostitution related deportation and remaining 40 (49%) cities had two or more prostitution related deportations in the entire year (TNP, 2003). Therefore, following the same approach taken for the measurement of human trafficking above, migrant prostitution is also operationalized as a count variable as the number of foreign women deported because of involvement in prostitution in a city.

Violent crime:

Because of the mortal nature of the offense and higher availability, validity, and reliability of the homicide measures (Howard et al., 2000), the number of homicides are used as an indicator of violent crime rates across the cities in Turkey. Several prior studies also used homicide rates to analyze distribution of violent crime rates across US cities and counties (Baumer, 1994; Champlin and Cochran, 2004). Hence, the number of homicides in the year 2003 is used as a measure of violent crime in each city in Turkey.

Statistics about the number of homicides in each city are obtained from the Turkish National Police.

Property crime:

Burglary rates are used as an indicator of property crime in the previous work in the context of communities and crime research literature (Hannon and Defronzo, 1998; Lee and Ousey, 2001). Thus, the number of burglaries in each city in the year 2003 is obtained from the Turkish National Police.

Total (public order) crime rate:

Turkish National Police provide separate annual statistics for different types of crimes. For example, terror, smuggling, human trafficking, and (illegal) drug related crimes and organized crime rates are reported separately. However, certain type of crimes are aggregated under the name of "public order crimes" and TNP provides aggregated annual statistics for these crimes which include murder, rape, robbery, aggravated assault, burglary, larceny, and motor vehicle theft. As these include both property and violent crimes, they constitute a measure for total/overall crime; therefore, the number of public order crimes in the year 2003 and 2005 is used as indicator of the number of total crimes in each city.

Organized crime rate:

Like in the U.S., there is not a universally accepted definition of organized crime in Turkey, for Turkish law does not provide a legal definition for 'organized crime'. In general, organized crime incidents include any crime incidents that involve the use of threat, violence, and other forms of coercion and that are committed only by organized crime groups which are established for the purpose of generating (illegal) monetary profit

(KOM, 2008). In this regard, organized crime incidents exclude terror and drug related crimes even if they are committed by organized criminals (see KOM, 2004, 16 - for a detailed explanation of activities that arrested organized crime groups were found to have been involved in during 2003 and 2004).

Organized crime and common crime are suggested to be influenced by many of the same factors. To illlustrate, rapid urbanization, industrialization, and social disorganization are contended to facilitate organized crime as tolerance for deviant behavior would create many criminal opportunities that might be exploited by criminal networks (Finckenauer and Voronin, 2001). Accordingly, as an indicator of tolerance for disorderly and deviant behavior, prevailing migrant prostitution is expected to have a positive impact on the number of organized crime incidents in a city. The number of organized crime incidents across 81 cities in the entire year of 2005 as provided by the TNP Department of Anti-Smuggling and Organized Crime (generally known as 'KOM' in Turkish) is used as a measure of the distribution of organized crime incidents in Turkey.

Independent variables:

A similar set of independent variables are being used at the Turkish city level as were employed at the international country level:

Poverty:

Poverty is assumed to deprive a society of necessary monetary and political resources that could allow the people to address the issues of crime and disorder in their community (Kornhauser, 1978). When the residents are unable to harness or attract resources that could help them to organize their community, they would be more likely to

become disengaged in the community with weakening social ties and informal networks. Past research on ecological predictors of crime has emphasized poverty as one of the key determinants of urban crime rates (Oh, 2005; Lee, 2000; Parker, 1989). Poverty is contended to be the most related factor to the geography of crime (Ackerman, 1998) and several studies provided empirical evidence as to positive impact of poverty on violent and property crime rates across U.S. counties, cities, and MSAs (Bachman, 1991; Baller et al., 2001; Baumer, 1994; Eitle et al., 2006). In an analysis of the distribution of terrorist incidents in Turkey, Koseli (2006) also found a significant positive impact of poverty on terrorist incidents across all 81 cities in Turkey. Given the substantial evidence of the positive impact of poverty on the geography of crime, poverty is expected to have a similar effect on the distribution of human trafficking markets in Turkey as cities with more poverty would lack the resources to resist the establishment and diffusion of illegal trafficking markets in their communities. Poverty is generally measured as the proportion of the population living under the poverty line in a geographic area. However, this measure of poverty is not available in Turkey. Instead, similar to the measurement of poverty in the cross-national context, gross domestic product (GDP) per capita in Turkish Lira in the year 2000 is used as a measure of absolute poverty in each city.

Residential Mobility:

Considering that the development of trust and social ties among the residents of a community would require some time (Sampson, 1997; Sampson and Groves, 1989), residential stability is supposed to have a negative impact on the geography of crime as it contributes to the establishment of friendship networks and local relational ties in the community. While a sense of ownership of a community would emerge as a result of

strong social integration among stable residents, this could also allow them to address their common problems such as resisting the establishment and diffusion of human trafficking markets through formal and informal social controls. Past research on violent and property crimes has already indicated the negative impact of residential stability on the distribution of crime across U.S. counties, MSAs , and cities (Bouffard and Muffic, 2006; Eitle et al., 2006; Haynie and Armstrong, 2006). The percent of residents who have lived in the same residence for the past five years (Eitle et al., 2006) is generally used as an indicator of residential stability. However, as Bursik and Grasmick (1993) contended, this indicator would fail to capture residential mobility if a large number of people left the city where the remaining smaller population has lived more than five years. Therefore, given that all of the people moving in and out of the city would have an impact on social integration, the total number of people (per thousand population) moving in and out of the city in the last five years is utilized as a measure of residential mobility in this study. The total number of people moving in and out of each city during the last 5 years is obtained from the 2000 census data.

Heterogeneity:

Ethnic, racial, or linguistic heterogeneity in the community can impede communication among different groups because of the presence of diverse cultural values and norms. Lack of communication, on the other hand, prevents the members of a community to reach a level of consensus with respect to appropriate behaviors and goals in their community (Elliott et al., 1996). In the case of human trafficking, heterogeneity would hamper any possible concentrated effort aimed at controlling the behaviors of traffickers and their customers in a given city. Past research provided evidence for the

positive impact of heterogeneity or diversity on the distribution of crime rates across cities and counties (Baumer, 1994; Haynie and Armstrond, 2006). Even though a heterogeneity index (Osgood and Chambers, 2000), or the proportion of a certain racial or ethnic group in a community (Baumer, 1994), were employed as a measure of heterogeneity in prior studies, such measures as the proportion of different ethnic and racial groups is not available in Turkey; therefore, the proportion of foreigners as percentage of total population in a given city in the year 2000 is used as a measure of heterogeneity.

Family disruption:

According to Sampson (1986 and 1987), family disruption decreases involvement in both formal and informal social control mechanisms. More specifically, family disruption contributes to social disorganization by leading to decreased participation in local voluntary organizations, disruption of the socialization and supervision of youths, and to lack of active guardianship in an area (Sun et al., 2004). Family disruption, thus, decreases the level of formal and informal social control over both traffickers and potential customers (youth) of their illegal services in the community. Family disruption is generally operationalized as the number of divorces per 1,000 marriages and/or family headed households in a geographic area and is found to have significant positive impact on the distribution of crime across U.S. cities and counties (Baller et al., 2001; Baumer, 1994; Liska and Bellair, 1995). Similarly, for the analysis of the distribution of human trafficking markets across the cities in Turkey, the number of divorces per 1,000 marriages is employed as a measure of family disruption based on 2000 census data.

Urbanization:

Urbanization is contended to produce criminal opportunities because of weak social ties in the community. Even though urbanization increases interaction among the people living in an urban area, it weakens local friendship and kinship networks and impedes social participation in local affairs (Sampson and Grove, 1989, 782). Moreover, "Economic development, industrialization, and urbanization both stimulate and facilitate demand for goods and services... This demand may be for drugs, firearms, or sex workers, or it may be for a service such as protection or resolving disputes when there is no acceptable legal means of doing so" (Finchenauer and Voronin, 2001, 3). Thus, rapid urbanization in certain cities could benefit trafficking markets because of increased demand for their services in an environment which is comprised of more potential customers coming in and out for work or recreation with relatively weak social controls. Urbanization is generally measured as the proportion of the population living in urban areas and demonstrated to have significant positive impact on the distribution of property and violent crime in the U.S. counties (Smith and Parker 1980; Kposowa et al., 1995). TURKSTAT provides information about the percent of the population living in urban areas in each city and this information is incorporated as a measure of urbanization for the analysis of human trafficking markets in Turkey. Specifically, the proportion of population living in the city centers and in the districts with more than 100,000 population is used as a measure of urbanization, as the latter measure generally applies to the central districts surrounding the city centers in metropolitan cities (i.e., Izmir, Istanbul, and Ankara).

Total Population:

Mostly employed as a control variable (Kowandzic et al., 1998), increased population size contributes to increased crime and victimization as it encourages anonymity in the community. Several studies indicated significant positive impact of population size on crime across U.S. cities, MSAs, and counties (Blau and Blau, 1982; Haynie and Armstrong, 2006; Eitle et al., 2006; Hannon and Defronzo, 1998). As far as human trafficking is concerned, population size could contribute to development of human trafficking markets because of increased number of potential customers and increased anonymity which disrupts the level of control over the traffickers and the customers of their illegal services. Therefore, population size as provided in the 2000 census is incorporated as another independent variable into the analysis of human trafficking markets in Turkey.

International border gates:

Past research on the diffusion of illegal drug markets demonstrated that the communities closer to the places where the illegal drugs are produced or exported are more likely to have illegal drug markets (Frischer et al., 2002; Rengert, 1996). It may be assumed that the cities bordering other countries or those with international airports and seaports might be more likely to be exploited by traffickers as such proximity would decrease the cost and duration of transportation and thus the probability of detection and apprehension. To see whether this impact of geographic proximity applies to distribution of human trafficking markets in Turkey, a dichotomous variable is created for the presence of international border gates in each city. The cities with international border gates are coded as 1 and the others without international borders are coded as 0.

Information about the presence and absence of international border gates is provided by the Turkish National Police.

Control Variables:

Two control variables, unemployment and the proportion of population between the age of 15 and 24 in a city, are going to be included in the analysis of human trafficking markets in Turkey.

Population Aged Between 15 and 24:

The impact of the proportion of the population between the age of 15 and 24 on the dispersion of violent and property crimes across the cities and counties is not always straight forward. Whereas some of the previous research noted significant positive impact of this specific population on crime rates (Hannon and Defronzo, 1998), others found significant negative (Eitle et al., 2006) or nonsignificant impact (Liska and Bellair, 1995; Bachman, 1991). Information about the proportion of the younger population in the cities is retrieved from 2000 census.

Unemployment:

Unemployment rate, which is obtained from the 2000 census, is also incorporated into the analysis of human trafficking markets in Turkey. Similar to the impact of younger population, the impact of unemployment on crime rates is also not consistent across different studies (see Baller et al., 2001; Land et al., 1990).

4. Analytic strategy

There are two independent data sets used in the course of this study, that is, cross-national and the national datasets. Cross-national data are utilized to investigate the distribution of human trafficking markets across 53 world nations. The national data

about human trafficking in Turkey, on the other hand, is built to investigate the distribution of human trafficking markets across 81 cities in Turkey.

In order to explore the geography of human trafficking markets, first, a correlation matrix for structural variables in each data set is estimated to examine bivariate relationships and potential multicollinearity among independent and control variables. Then, multivariate analyses is applied to test specified hypotheses enumerated above. Multiple regression estimation is the main analytic tool employed in both cases. Individual impact of each hypothesized structural characteristic on the cross-national distribution of human trafficking markets is estimated while controlling for the impacts of all other structural (independent and control) variables. Three different models are estimated for the distribution of human trafficking across 53 countries. Moreover, the ability of the same models in predicting human trafficking "to" and "from" the world nations is investigated as well.

As for the distribution of human trafficking markets in Turkey, ten different models are estimated. The first six models look at the impact of the population size, geographic proximity, and structural correlates of social disorganization as well as the impact of other control variables on the distribution of migrant prostitution and human trafficking markets across the cities. The following four models, on the other hand, examine the impact of migrant prostitution on the distribution of human trafficking markets (in 2006), total crime (in 2005), and organized crime (in 2005) across the cities, net of all other hierarchical diffusion, social disorganization, and control variables.

In these final four models, migrant prostitution across cities in Turkey is considered as a sign of social disorder. As explained in much more detail in previous

chapters, theory predicts that there will be an association between (migrant) prostitution and human trafficking and other violent and property crimes as well as organized crime incidents. Also supported by reviewed literature, as a sign of social disorder and thus an indicator of a given community's inability to regulate its residents' and visitors' behaviors, prostitution is expected to fuel more serious crime including human trafficking in a given society. Simply put, visible social disorder, including drug dealing, prostitution, and sexually-oriented enterprises (Taylor, 1995) leads law-abiding residents to withdraw from public life as they assume that the neighborhood is disorganized and not safe (Lewis and Salem, 1986; Skogan, 1990). Thus, while they become less motivated to intervene in physical and social disorder around them, this ongoing tolerance for disorder attracts outside trouble makers as a signal of increased opportunity for delinquent or criminal behavior.

To test this premised relationship between prostitution and human trafficking and more serious crimes, first, independent sample t tests are employed to see the impact of the presence of migrant prostitution on the distribution of violent, property, overall (public order) crime rates, and organized crime incidents across the cities in a given or following year. Next, four different regression models are estimated. The first two models examine the impact of migrant prostitution (2003) on both measures of human trafficking across the cities. Then, the final two models try to see if migrant prostitution in 2003 also has significant impact on the distribution of total (public order) crime and organized crime incidents in 2005 when other structural correlates and controls are held constant.

In sum, both bivariate and multivariate statistics are employed while analyzing the data. When multiple regression is applied, OLS, logit, and negative binomial regression models are used when appropriate.

CHAPTER FIVE

ANALYSES and FINDINGS

This chapter presents major research findings regarding cross-national distribution of human trafficking markets and the distribution of human trafficking markets in Turkey. Given the focus of this dissertation on three main research questions as regard to the distribution of human trafficking at two different levels of analyses, this chapter is divided into three major subsections corresponding to each research question. In the first section, the impact of macro level structural factors on cross-national distribution of human trafficking markets is investigated. In the second section, the diffusion of human trafficking markets across 81 cities in Turkey is examined. Specifically, the analysis explores the impact of hierarchical diffusion and social disorganization on the distribution of human trafficking markets in Turkey. In the final part, the impact of migrant prostitution on the distribution of human trafficking markets and other serious crimes in Turkey is estimated. Overall, univarite/descriptive, bivariate, and finally multivariate analyses are performed on both datasets. Multivariate analyses are conducted using linear, logit, and count regression models when appropriate.

1. Cross-national distribution of human trafficking markets

(1) Summary statistics

Information about a total of 53 countries is utilized for cross-national analysis of the distribution of human trafficking markets. Once again, the sample size is limited by the availability of the information about independent variables used in the course of this study. In fact, scarcity of the information about potential explanatory variables might have also increased the possibility of omitted variable bias for multivariate analyses to be

provided; however, theoretical guidance provided by social disorganization framework and the review of empirical studies on human trafficking suggested the most relevant indicators and control variables which are included in the present study. Moreover, different countries from almost all regions of the world including Asia, Europe, North America, South America, Central America and Caribbean, Africa, Middle East and North Africa, Australia and Oceania are included in this available sample of world nations.

Descriptive statistics presented in Table 1 demonstrate general sample characteristics. Although this study operationalized human trafficking as a combined measure of human trafficking from and to a single country, additional two models with regard to human trafficking from and to a county are also going to be estimated to promote the reliability of findings. Accordingly, summary statistics about all three different dependent variables are provided below. On average, the levels of trafficking from and to countries are quite close to each other with a mean score of 2.25 and 2.32 respectively. Among 53 countries in the sample, 11 countries (21%) scored 4 (regular cases of trafficking in large numbers) on Bales' (2005) five point (0-4) ordinal human trafficking scale, whereas remaining 10 (19%) countries scored 3 (regular cases of trafficking in small numbers); 15 (28%) countries scored 2 (occasional but persistent case of trafficking); 15 (28%) countries scored 1 (rare cases of trafficking); and 2 (4%) countries scored 0 (no trafficking) on the same scale. As far as human trafficking to a country is concerned, all countries in the sample were exposed to human trafficking as a destination country to some extent. Specifically, 9 (17%) countries scored 4; 14 (26%) countries scored 3; 15 (28%) scored 2; and finally, 15 (28%) countries scored 1 on the same scale. When these two measures are combined together into a single "Total

trafficking" variable, human trafficking in 29 (55%) countries was less than average ranging from 1 to 4. The remaining 24 countries, on the other hand, were exploited relatively more as human trafficking in these countries ranged from 5 to 8, which is above the average.

Table 1. Descriptive Statistics (N=53)

Variable	Mean	SD	Min	Max
DEPENDENT VARIABLES				
Total Trafficking (a)	4.57	1.93	1.00	8.00
Trafficking to a Country	2.32	1.07	1.00	4.00
Trafficking from a Country	2.25	1.19	0.00	4.00
INDEPENDENT VARIABLES				
Total Population (000)	58559.42	177825.90	1285.00	1273979.00
GDP per capita	10453.96	10571.75	656.00	34478.00
Urbanization	65.36	17.81	21.10	100.00
Heterogeneity	8.56	9.75	0.04	40.69
Residential Mobility	0.55	0.98	-1.30	2.90
Family Disruption	1.70	1.05	0.15	4.35
CONTROL VARIABLES				
Population Aged 15-24 (%)	15.77	2.91	11.10	20.80
Gini	35.72	8.39	24.70	59.30

Note : (a) Additive Scale (Trafficking from a Country + Trafficking to a Country)

As the nations in the sample represent a wide range of regions around the world, there is considerable amount of variation in their characteristics as regard to independent and control variables. The number of population ranges from 1,285 to 1,273,979 (thousand) with an average population of 58,559.4 (thousand). The distribution of GDP per capita also varies substantially in that it ranges from $ 656 to $ 34,478 with an average per capita GDP level of $ 10,571.8 per capita. On average, the level of urbanization across the sample is 65.4 percent and it ranges from 21 percent to 100 percent. There is considerable variation in terms of heterogeneity across the nations as it ranges from .04 percent to 40.7 percent with an average of 9.8 percent. Family disruption ranges from .2 to 4.4 with an average of 1.1 divorces per thousand population. Finally, of

two control variables, percentage of the population aged 15-24 ranges from 11.10 to 20.80 with a mean score of 15.77 percent, whereas GINI coefficient ranges from 24.70 to 59.30 with an average of 35.72.

Considering extensive variation in some of independent and control variables, all of the variables are checked for normal distribution prior to bivariate and multivariate analyses. Univariate distributions revealed high degree of skewness for total population, heterogeneity, and gini coefficient. Given the small sample size, to maximize linear fit and thus facilitate linear modeling (Li, 1995; Messner, 1989), natural log transformations (ln) are performed for these three variables and the transformed variables are utilized in the following bivariate and multivariate analyses.

(2) Bivariate Analysis

Prior to multivariate modeling, bivariate correlations between dependent, independent, and control variables have been examined. Only two hypotheses specified in the previous chapter, that is, H_{1a} and H_{1f} are supported by the following correlation analyses in Table 2. First, a statistically significant and negative relationship between GDP per capita and Total Trafficking (-.45, $p<.01$) indicates that poverty has a positive impact on Total Trafficking in a country and the nations with lower GDP per capita are exposed to more human trafficking (H_{1a}). Second, the significant positive relationship between Total Population (ln) and Total Trafficking (.37, $p<.01$) lends support for H_{1f}. As expected, countries with larger populations are exploited more by human trafficking markets. However, bivariate correlations do not support the remaining four hypotheses

(H_{1b}, H_{1c}. H_{1d}. H_{1e}) about the impact of Heterogeneity, Residential Mobility, Urbanization, and Family Disruption on Total Trafficking.

Table 2. Bivariate Correlations

		1	2	3	4	5	6	7	8	9
1.	Total Trafficking	-								
2.	GDP per capita	-.45**	-							
3.	Residential Mobility	-.06	.05	-						
4.	Heterogeneity (ln)	-.36**	.47**	-.60	-					
5.	Urbanization	-.16	.63**	.08	.49**	-				
6.	Family Disruption	-.15	.37**	-.29*	.44**	.42**	-			
7.	Total Population (ln)	.37**	.10	.14	-.36**	.00	.12	-		
8.	Population Aged 15-24 (%)	.21	-.80**	.34**	-.41**	-.53**	-.45**	-.05	-	
9.	Gini (ln)	.10	-.32*	.53**	-.19	-.08	-.40**	.12	.50**	-

Note: Entries are Pearson Correlation Coefficients; *p<.05, **p<.01 (2-tailed tests).

In contrast, the sign of all these independent variables are in the opposite direction, though only one of them, heterogeneity, had a significant impact on Total Trafficking in a country. Heterogeneity was hypothesized to have a positive impact on cross-national distribution of human trafficking; yet, it has a significant negative impact (-.36) on total Trafficking. However, considering the limitations of a given bivariate relationship in terms of its validity, discussion about counterintuitive findings are going to be provided following the multivariate analyses as, for example, certain other factors explaining both independent and dependent variable in a bivariate analysis can invalidate this (spurious) relationship in a multivariate context. To illustrate, this may be the case for the relationship between Heterogeneity and Total Trafficking when the significant positive relationship between GDP per capita and Heterogeneity and the negative relationship between GDP per capita and total trafficking are taken into consideration. Even though four independent variables and both control variables are not significantly

related to total trafficking, they are going to be retained in the following multivariate models because there is theoretical and empirical justification for their expected influence on the distribution of crime rates.

As for bivariate correlations between independent and control variables, a common problem in macro level analysis of crime is that structural characteristics of population aggregates are generally intercorrelated. Extremely high intercorrelations between independent variables can give rise to multicollinearity in a multivariate context. Specifically, a correlation between independent variables exceeding .70 can create large standard errors for regression coefficients and generate unstable parameter estimates (Pratt and Godsey, 2003). Even though bivariate correlations between independent and control variables are generally less than .70, the high correlation between GDP per capita and Population Aged 15-24 (.80, $p<.01$) signals a potential problem for multicollinearity (Gujarati, 2003). A number of different age cohorts as an indicator of the proportion of younger population in a country (i.e. percentage of population aged 15-29, 15-34, 15-39) have been included in bivariate analyses; however, correlation between GDP per capita and the percentage of all these age groups always exceeded .70. Therefore, Population Aged 15-24 is retained for multivariate analyses presented below. However, additional tests for multicollinearity will be conducted in the following multivariate anlaysis.

(3) Multivariate Analysis

Informed by empirical research on human trafficking and mainly guided by migration systems and social disorganization theories, the following multivariate analyses are intended to estimate exploratory models for cross-national distribution of human trafficking across 53 countries. Of nine different models estimated below, the first three

models investigate the impact of macro level structural factors on the distribution of total human trafficking, whereas the remaining six models examine whether the influence of the same structural factors holds for human trafficking from and to 53 countries in the sample. Table 3 and Table 4 present the results of Ordinary Least Squares and Ordered Logit Regression analyses.

First, as the base model, an OLS regression model is estimated by regressing total trafficking on independent variables GDP per capita, urbanization, heterogeneity (ln), residential mobility, family disruption, and total population (ln) in Model 1. This first model explains 45% of variance in total trafficking and supports three hypotheses as regard to the impact of poverty (H_{1a}), urbanization (H_{1d}), and total population (H_{1f}) on cross-national distribution of human trafficking. As expected, poverty, urbanization, and total number of population have a positive impact on total trafficking in a country controlling for the impact of residential mobility, heterogeneity, and family disruption. In other words, countries with more poverty, urbanization, and total population are exploited more by human trafficking markets net of the impact of remaining independent variables. The other three hypotheses as regard to the impact of heterogeneity (H_{1b}), residential mobility (H_{1c}), and family disruption (H_{1e}), however, are not supported by the first model. That is, heterogeneity (ln), residential mobility, and family disruption do not have significant impact on cross-national distribution of human trafficking when GDP per capita, urbanization, and total population (ln) are held constant.

In the second model, the introduction of control variables gini (ln) and population aged 15-24 provides a better fit to the data and results in 8 % increase in R^2 ($\Delta F = 3.79$,

p<.05). Moreover, coefficients of GDP per capita and total population are also increased in the second model, whereas the impact of urbanization on total trafficking remained the same.

Table 3. OLS Regression Models for Total Trafficking (N=53)

	Model 1 Total Trafficking		*Model 2* Total Trafficking		*Model 3* Total Trafficking	
Variable	**B (SE)**	**VIF**	**B (SE)**	**VIF**	**B (SE)**	**VIF**
Constant	-2.32 (2.13)	-	8.56[a] (4.96)	-	4.34 (4.76)	-
Independent Variables						
GDP per capita	-.0001*** (.00003)	1.88	-.0002*** (.00004)	4.88	-.0002*** (.00004)	4.87
Urbanization	.03** (.02)	1.92	.03* (.02)	2.06	.03[a] (.02)	2.14
Heterogeneity (ln)	.04 (.21)	2.11	.10 (.20)	2.15	.17 (.19)	2.21
Residential Mobility	-.34 (.24)	1.22	.19 (.30)	2.13	.09 (.27)	2.02
Family Disruption	-.30 (.26)	1.73	-.43 (.26)	1.89	-.38 (.25)	1.91
Total Population (ln)	.66** (.18)	1.49	.70*** (.17)	1.57	.66*** (.16)	1.58
Control Variables						
Population Aged 15-24	-		-.35* (.15)	4.77	-	-
Gini (ln)	-		-1.42 (1.26)	1.93	-.95 (1.21)	1.99
Population Aged 15-19	-		-		-.77** (.22)	4.17
Population Aged 20-24	-		-		.44 (.33)	4.61
F	6.20***		6.16***		6.89***	
R^2	.45		.53		.59	
AIC	3.80		3.72		3.61	

Note: Entries are unstandardized coefficients and numbers in parenthesis are standard errors; [a]p<.10; *p<.05; **p<.01; ***p<.001

Thus, the impact of poverty, urbanization, and total population on cross-national distribution of human trafficking remains significant even when inequality and the

proportion of younger population in a country are controlled. Heterogeneity, residential mobility and family disruption do not have significant impact on total trafficking in the second model either. Even though such macro level structural characteristics can hardly be regarded as favoring a specific theoretical framework; the results of Model 1 and Model 2 support migration systems theory (as regard to its broad discussion about traffickers) and also provide partial support for social disorganization framework (as regard to the impact of poverty and urbanization on the distribution of crime). However, the lack of impact of heterogeneity, residential mobility, and family disruption on the distribution of crossnational human trafficking is not consistent with social disorganization theory. Further theoretical implications of these findings are provided in the following chapter.

An unexpected finding in the second model, however, is significant negative impact of the percentage of younger population on total trafficking in a country. In spite of sizable higher correlation between percent of population aged 15-24 and per capita GDP, several model selection procedures (i.e., stepwise regression, forward selection, and backward elimination) suggested that this control variable be retained in Model 2 together with per capita GDP and total population (ln). Once this variable is retained in Model 2, mean VIF inflates from 1.92 to 2.67 with the highest VIF score of 4.88 (for GDP per capita). Although not perfect, VIF scores for per capita GDP and percentage of population aged 15-24 are quite lower than the VIF score of 10, which is regarded as an indicator of high collinearity (Gujarati 2003; Neter, Wasserman, and Kutner, 1990; DeMaris, 2004; Lim, Bond, and Bond, 2005)[4].

[4] However, see Allison (1999) for a more conservative discussion about the level of VIF scores in terms of multicollinearity.

Removing percentage of population aged 15-24 from Model 2, on the other hand, results in a statistically significant 6% decrease in R^2 ($\Delta F = 5.55$, $p<.05$) and again the same variables (GDP per capita, urbanization, and total population) significantly predict total trafficking in a country. In both cases, neither the reduced nor full versions of Model 2 present evidence for heteroscedastic error variance[5]; and examination of residuals does not indicate any outlying cases that could unduly influence the regression coefficients[36]. Thus, despite a certain level of multicollinearity mainly caused by the retention of this variable, percentage of the population aged 15-24 is not dropped from Model 2 to avoid model misspecification. However, the significant impact of younger population on total trafficking in the opposite direction demanded further investigation as presented in the final Model 3.

In fact, even though social disorganization theory and empirical studies on cross-national distribution of crime, specifically on violent crime/homicide, found positive impact of this age cohort (or slightly different cohorts of younger population) on the distribution of crime, there are others who found negative impact of younger population on crime rates at different levels of analysis (Bennett, 1991; Lee, 2006). In their analysis of adult homicides across US counties, Lee and Bartkowski (2004) found significant negative impact of population aged 15-29 on adult homicide and they suggested that a large proportion of younger population (15-29) may indicate limited social integration and interaction as smaller segment of population would be attached through intimate

[5] Breusch –Pagan/Cook – Weisberg test for heteroscedasticity indicated constant variance ($p>X2(2.27) = .13$).

[6] For Model 2, studentized residuals range from -2.08 to 1.95, and thus, both are in the acceptable range. Hat values (leverages) range from .3 to .41, again all lower than the threshold of $3p/n = .45$. DFBETAS range from -.48 to .54, and thus, all less than the critical value of 1 (Agresti & Finlay, 1997).

relationships. Simply put, when there is a large young population (and a corresponding smaller older population), since younger people are less likely to integrate/interact with others compared to older people in the community, there will be less interaction among the people in the community and this will decrease the possibility of/opportunity for victimization and offending. This may be the case for human trafficking as well based on human trafficking literature which often talks about victims as being recruited and exploited by their significant others whom the victims trusted in. Specifically, relatives and neighbors are as much likely as strangers to recruit and exploit trafficking victims (see, for example, Brunovskis and Tyldum, 2004; INCIDIN, 2002). If this is the case, once the percentage of the population aged 15-24 is disaggregated into two groups as the proportion of population aged 15-19 and 20-24, the countries with more aged 20-24 population would have more human trafficking as this category is older and thus might be more likely to integrate and interact with others through several ways such as education, employment, and entertainment –which might increase the opportunities and possibilities for offending and victimization. On the other hand, having more of aged 15-19 population would decrease such interactions and have a negative impact on offending and victimization and thus on human trafficking as well.

The final model, Model 3, attempts to elaborate this speculated impact of younger population on cross-national distribution of human trafficking. As demonstrated, once the proportion of population is divided into two groups, as expected, the proportion of younger cohort (aged 15-19) has a significant negative impact on total trafficking whereas the older group does not have a significant impact at all. Entering these two variables significantly contributes to linear fit of the model (R^2=.59) and Akaike

Information Criterion (AIC) statistics also favors this final model, Model 3, as a better and more parsimonious fit among all three models estimated[7]. While per capita GDP and population remained significant together with the percentage of population aged 15-19 in Model 3, efficiency of urbanization is reduced in this final model, though it is still cautiously significant ($p<.10$). Retention of other independent variables heterogeneity, residential mobility and family disruption is based on theoretical considerations, though they do not significantly contribute to any of the models estimated.

Given the scarcity of quantitative studies on human trafficking, in addition to afore mentioned model selection and specification procedures, the following ordered logit models for human trafficking to-and-from a country are also estimated to further the reliability of OLS regression results. Ordered/ordinal logistic regression (OLR) is preferred for the analyses of trafficking from and to countries, for both variables are coded as ordered/ordinal (response) variables in Bales's human trafficking scales (0=no trafficking; 1= rare cases of trafficking; 2=occasional but persistent cases of trafficking; 3=regular cases of trafficking in small numbers; 4=regular cases of trafficking in large numbers). Even though response variable in an OLR model is comprised of multiple categories, OLR produces only one set of coefficients for each parameter. Therefore, an underlying assumption of OLR, which is called "the proportional odds assumption" or "the parallel regression assumption", is that the coefficients of the parameters in the equation would not vary significantly if they were estimated separately. The importance of this assumption is that since the slopes are expected to be same, once this assumption

[7] For Model 3, studentized residuals are lower than 3 (they range from -1.96 to 2.19 with the latter one as the highest score). Leverages are also lower than the suggested limit of .51 (3p/n) ranging from .05 to .44. DFBETAS are also in acceptable limits within the range of -.62 to .42. Finally, Breusch –Pagan/Cook – Weisberg test for heteroscedasticity indicates constant variance ($p>X2(1.37) =.24$).

is violated, separate models are needed to describe the relationship between each pair of outcome groups. Investigation of this assumption across all six OLR models indicates that there is no significant difference in the coefficients between models [8].

Table 4. Ordered Logit Regression Models for Trafficking to and from the countries (N=53)

	Trafficking from a country			**Trafficking to a country**		
	Model 4	***Model 5***	***Model 6***	***Model 7***	***Model 8***	***Model 9***
Variable	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Independent Variables						
GDP per capita	-.0003***	-.0004***	-.0004***	-.00005	-.0001**	-.0001*
	(.00006)	(.0001)	(.0001)	(.0003)	(.00006)	(.00006)
Urbanization	.04 [a]	.05*	.04 [a]	.04 [a]	.04 [a]	.03
	(.02)	(.03)	(.03)	(.02)	(.02)	(.02)
Heterogeneity (ln)	.08	.17	.27	.10	.14	.24
	(.27)	(.28)	(.29)	(.25)	(.26)	(.26)
Residential	-.91**	-.07	-.25	-.09	.53	.52
Mobility	(.34)	(.44)	(.46)	(.29)	(.39)	(.39)
Family Disruption	-.31	-.55	-.51	-.35	-.49	-.48
	(.34)	(.37)	(.38)	(.34)	(.36)	(.37)
Total Population	.80**	.91**	.87**	.74**	.84**	.86**
(ln)	(.26)	(.28)	(.28)	(.24)	(.26)	(.26)
Control Variables						
Gini (ln)	-	-1.08	-.67	-	-1.59	-1.43
		(1.74)	(1.77)		(1.69)	(1.69)
Population Aged	-	-.59**	-	-	-.41 [a]	-
15-24		(.25)			(.21)	
Population Aged 15-19	-	-	-1.07**	-	-	-.98**
			(.36)			(.33)
Population Aged 20-24	-	-	.36	-	-	.55
			(.52)			(.46)
Model X^2	52.80***	59.54***	63.71***	15.28*	20.97**	26.36**
Pseudo R-Squared	.33	.38	.41	.10	.14	.18

[a] p<.10; *p<.05; **p<.01; ***p<.001

[8] A likelihood-ratio test of proportionality of odds across response categories tests the null hypothesis that there is no difference in the coefficients between models. All LR tests across six models are non-significant (p>.05). Brant test is also used to examine individual coefficients estimated in the final models 3 and 6 and it indicates that parallel regression assumption is not violated for individual coefficients either. Finally, investigation of goodness of fit indicated that both models fit the data well as pearson and deviance statistics are both non-significant.

Table 4 presents the results of OLR analyses for trafficking from and to 53 countries. Independent and control variables are entered into the models in the same manner they were entered into OLS models above; that is, starting with base models with no control variables, two additional models are estimated with the introduction of control variables gini coefficient and proportion of population aged 15-24 into the second and gini coefficient and percentage of population aged 15-19 and percentage of population aged 20-24 into the third models for each of the dependent variables-trafficking from and trafficking to a country-. In general, the same indicators that significantly predict total trafficking in a country also predict trafficking from and to a country, though with fluctuations in their confidence levels.

For human trafficking from a country, both per capita GDP and population (ln) have significant impact on trafficking from a country across all three models. The countries with more per capita GDP are exploited less by human trafficking markets, whereas countries with larger population are targeted more as source countries. Urbanization is also positively associated with human trafficking from a country, though it is cautiously significant in Model 1 and Model 3. Unexpectedly, residential mobility has a significant negative impact on human trafficking from a country in the first model without controls. Once the proportion of younger population is introduced into the second and third models (no matter it is in combined 'aged 15-24' or disaggregated 'aged 15-19' form), however, this control variable(s) negatively impact human trafficking from a country and the significant impact of residential mobility disappears. Thus, it can be speculated that the negative impact of residential mobility on trafficking from a country might also stem from its negative impact on social integration, which might be helpful for

the traffickers especially at the recruitment phase of human trafficking as to be elucidated in the next chapter.

As for human trafficking to a country, however, the discriminatory powers of all three models (7, 8, and 9) are relatively less than Model 4, 5, and 6 (be aware that final three models are estimated with a different dependent variable 'trafficking to a country'). Although urbanization has significant positive impact on trafficking to a country in the first two models, the results should be interpreted cautiously ($.06<p<.10$); and, in the final Model 9, it does not have significant impact on human trafficking to a country at all. Poverty, total population (ln), and the proportion of younger population (aged 15-19), on the other hand, have significant impact on human trafficking to the countries in the sample. Simply put, the countries with more poverty, larger population, and with smaller younger population (aged 15-19) are targeted more by human trafficking markets as destination places.

To sum up, both OLS and OLR models provide certain level of support for the hypothesized impacts of structural factors on cross-national distribution of human trafficking in the light of migration systems theory, social disorganization theory, and of previous research on human trafficking and on cross-national distribution of crimes. Poverty, urbanization, and total population provide evidence for the cross-national distribution of human trafficking in the hypothesized direction, whereas proportion of younger population in a country has an unexpected negative impact on human trafficking. Even though this finding seems to be counterintuitive at first, the findings of previous research regarding the impact of the proportion of younger population on the distribution of crime rates was not consistent either; yet, human trafficking literature helps to clarify

such unexpected relationship between younger population and human trafficking to some extent and more discussion regarding the findings of OLS and OLR models is going to be provided in the following chapter.

The next section examines trafficking in women across 81 cities in Turkey. Thus, it attempts to shed light on the relationship between structural factors and human trafficking by focusing on a specific (if not single) type of human trafficking in a culturally homogeneous context with a structurally heterogeneous sample of 81 provinces. Observed total trafficking in Turkey is 8, which is the maximum value on combined human trafficking scale. The predicted value for human trafficking in Turkey is 6.45 based on afore estimated final OLS model (Model 3) of total trafficking in a country. Apparently, both observed and predicted values of human trafficking in Turkey signals an opportunity to look at the relationship between structural factors and distribution of human trafficking markets across different cities. Additional factors to be considered in the Turkish context are expected to inform the limitations of cross-national models as well.

2. Distribution of Human Trafficking Markets in Turkey

In this section, human trafficking in Turkey is going to be investigated in the light of hierarchical diffusion, social disorganization, and social disorder frameworks. In this regard, three different models, one for each framework, are going to be estimated for the distribution of human trafficking markets across 81 cities in Turkey. Moreover, the impact of hierarchical diffusion and social disorganization on the distribution of migrant prostitution is also going to be examined. Finally, the relationship between migrant

prostitution and human trafficking, property and violent crimes as well as organized crime incidents is going to be investigated in bivariate and multivariate context.

(1) Summary statistics

Information about all 81 provinces of Turkey is included in the dataset for the analysis of the distribution of human trafficking markets and other crimes in Turkey. General characteristics of these 81 cities as regard to independent and dependent variables are presented in Table 5. Human trafficking incidents and calls for rescue are two different measures of human trafficking in Turkey for the entire year of 2006. The Turkish National Police recorded 153 human trafficking incidents in 23 provinces (28%) in 2006, which range from 0 to 45 incidents with a mean score of 1.89. The IOM office in Ankara, on the other hand, reported a total number of 579 calls for rescue in 36 provinces (44%) in 2006, which range from 0 to 218 calls with 7.07 calls on average (IOM, 2006; also see www.countertrafficking.org).

As an indicator of total crime in Turkey (excluding drug and terror related incidents), public order crimes in 2005 range from 232 to 135,834 with 6,021.74 crimes on average, whereas the same type of crimes were relatively less in the year 2003 as they range from 178 to 82,529 with a mean score of 3,972.90. The number of organized crime incidents recorded by the TNP during the entire year of 2005 ranges from 0 to 43 with 2.78 incidents on average. Homicides are considered as a measure of violent crime in the year 2003 and they range from 0 to 465 with 22.55 homicides on average. Property crimes, measured as the total number of burglaries in 2003, range from 21 to 39,118 with 1,479.15 burglaries on average.

Table 5. Descriptive Statistics (N=81)

Variable	Mean	SD	Min	Max
DEPENDENT VARIABLES				
Human Trafficking Incidents '06	1.89	6.12	.00	45.00
Calls for Rescue '06	7.07	28.71	.00	218.00
Public Order Crime '05	6021.74	15831.79	232.00	135834.00
Organized Crime '05	2.78	5.99	.00	43.00
Public Order Crime '03	3972.90	10072.49	178.00	82529.00
Homicide '03	22.55	56.19	.00	465.00
Burglary '03	1479.15	4749.91	21.00	39118.00
INDEPENDENT VARIABLES				
Total Population	837085.50	1231462.02	93584.00	10018735.00
GDP per capita	1479.57	744.06	453.00	4696.00
Urbanization	.32	.17	.06	.89
Heterogeneity	2.38	8.38	.02	72.48
Residential Mobility	15.47	4.26	8.73	36.90
Family Disruption	.11	.06	.01	.28
International Border	.58	.49	.00	1.00
Migrant Prostitution '03	21.91	68.95	.00	432.00
CONTROL VARIABLES				
Population Aged 15-24 (%)	20.61	2.13	16.55	30.86
Unemployment	7.85	3.11	3.60	17.40

The independent variables are intended to represent hierarchical diffusion, social disorganization, and social disorder across the cities. Diffusion is represented by total population and the presence of international borders in a city. Total population range from 93,584 to 10,018,735 with a mean population of 837,085. The presence of international borders in a city is dummy coded and it ranges from 0 to 1 with a mean score of .58. For social disorganization, traditional antecedents of social disorganization have been utilized. Per capita GDP is used to measure absolute poverty and it ranges from 453 to 4,696 with 1,479.57 (Yeni Turkish Liras/YTL) on average. Urbanization ranges from .06 to .89 with 32% of people living in the city centers on average. Heterogeneity ranges from .02 to 72.48 with a mean score of 2.38. Residential mobility

ranges from 8.73 to 36.90 with a mean score of 15.47. The final indicator of social disorganization is family disruption and it ranges from .01 to .28 with .11 divorces per thousand marriages on average.

Migrant prostitution is going to be used as both a dependent and an independent variable in the following bivariate and multivariate analysis procedures. It is considered as a single measure of social disorder and it ranges from 0 to 432 deportations with 21.91 deportations on average. Finally, from two control variables, the proportion of younger population (15-24) ranges from 16.55 to 30.86 with a mean score of 20.61 whereas unemployment ranges from 3.60 to 17.40 with a mean score of 7.85.

Before examining the bivariate relationships between independent and dependent variables, natural log transformation is performed for two independent variables, total population and heterogeneity, given the considerable positive skewness (West, Finch, and Curran, 1995) in both variables' distribution (Table 5).

(2) Bivariate Analysis

Both bivariate correlations and independent sample t tests are used to examine hypothesized relationships between independent and dependent variables in bivariate context. Moderate to strong bivariate correlations are found between the measures of human trafficking, total crime, and organized crime in Turkey (Table 6). This already indicates concentration of crime and disorderly behavior in certain places in Turkey. Moreover, human trafficking incidents are positively correlated with international borders (.25), total population (.44), heterogeneity (.48), urbanization (.28), and migrant prostitution (.77).

Table 6. Bivariate Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.HumanTrafficking Incidents	-													
2.Calls for Rescue	.81**	-												
3.Public Order Crime('05)	.58**	.90**	-											
4.Organized Crime ('05)	.53**	.77**	.90**	-										
5.GDP per capita	.23*	.25**	.33**	.48**	-									
6.Heterogeneity (ln)	.48**	.38**	.29**	.36**	.50**	-								
7.Residential Mobility	-.03	-.05	-.10	-.08	.24**	.06	-							
8.Urbanization	.28*	.38**	.52**	.55**	.25*	.09	-.14	-						
9.Family Disruption	.11	.11	.12	.15	.50**	.24*	.07	.03	-					
10.Total Population (ln)	.44**	.48**	.60**	.67**	.29**	.26*	-.54**	.43**	.13	-				
11.Migrant Prostitution	.77**	.84**	.74**	.63**	.20	.43**	-.07	.28**	.06	.42**	-			
12.International Border	.25**	.19	.23**	.31**	.20	.46**	-.09	.09	.01	.39**	.24**	-		
13.Population Aged 15-24 (%)	-.09	-.06	-.06	-.09	-.33**	-.24*	.20	.04	-.48**	-.14	-.03	-.12	-	
14.Unemployment	.11	.17	.22*	.24**	-.17	-.14	-.31**	.50**	-.48**	.35**	.14	.08	.36**	-

Note: Entries are Pearson Correlation Coefficients; *p<.05, **p<.01 (2-tailed tests).

Calls for rescue is also positively correlated with the same independent variables of international borders (.19), total population (.48), heterogeneity (.38), urbanization (.38), and migrant prostitution (.84); however, correlation between calls for rescue and the presence of international borders is not significant (p=.08). Thus, positive relationship between both measures of human trafficking and five independent variables of international borders, total population, urbanization, heterogeneity, and migrant prostitution lends support for the hypotheses H_{2a}, H_{2b}, H_{2d} , H_{2f} , and H_{3f} respectively. Namely, the cities with international borders and more population, heterogeneity, urbanization, and with more migrant prostitution also have more human trafficking incidents and more calls for rescue.

In fact, the same set of independent variables is also positively and significantly correlated with total crime and organized crime as well. In other words, besides having more human trafficking incidents and calls for rescue, the cities with international borders and more population, urbanization, heterogeneity, and with more migrant prostitution also have more total crime and organized crime. Additionally, unemployment is also positively correlated with total crime (.22) and organized crime (.24). Unexpectedly, GDP per capita is positively correlated with both measures of human trafficking. Other independent (residential mobility and family disruption) and control variables (population aged 15-24 and unemployment), however, are not significantly correlated with the measures of human trafficking.

As mentioned, migrant prostitution is considered both as a dependent and an independent variable in this study. In order to examine the impact of migrant prostitution on the distribution of human trafficking and other crimes, independent sample t tests have

been performed with unequal variances assumed and non-directional hypotheses (two-tailed), in which average human trafficking incident rates, calls for rescue rates, and other crime rates (per 10,000 population) of cities without migrant prostitution is subtracted from average incident rates, call rates, and other crime rates (per 10,000 population) of cities with migrant prostitution.

Table 7. Difference in human trafficking incident rate, calls for rescue rate, violent and property crime rate (per 10,000 population) means between the cities with and without migrant prostitution (N=81)

Variable	Mean Difference	t	P
Human Trafficking Incidents '06 per 10,000 population	.027	3.224	.002
Calls for Rescue '06 per 10,000 population	.049	2.592	.012
Public Order Crime '05 per 10,000 population	22.790	3.306	.001
Organized Crime '05 per 10,000 population	1.657	2.430	.017
Homicide '03 per 10,000 population	.077	3.236	.002
Burglary '03 per 10,000 population	5.565	3.160	.002
Public Order Crime '03 per 10,000 population	11.069	3.254	.002

As presented in Table 7, the cities with migrant prostitution have significantly more human trafficking, more violent and property crime, more total crime, and more organized crime in a given and following year. Thus, significant mean differences between the cities with and without migrant prostitution as regard to the number of human trafficking incidents and other violent, property, total crimes, and organized crime incidents support the hypotheses H_{3f}, H_{3g}, H_{3h}, H_{3i}, H_{3j}, and H_{3k}. As a dependent variable, on the other hand, migrant prostitution is positively correlated with heterogeneity (.43), urbanization (.28), and total population (.42), which indicates that the

cities with more heterogeneity, more urbanization, and more population also have more migrant prostitution and thus, lend support for the hypotheses H_{3b} and H_{3d}.

Finally, as a first step for identifying multicollinearity, correlations between independent and control variables are inspected and they do not indicate any serious problem since bivariate correlations are quite lower than the generally accepted threshold of .70 (Pratt and Godsey, 2003). However, further investigation of potential problems for multicollinearity is going to be carried out in multivariate context in the following section.

Overall, bivariate correlations and independent sample t tests provide substantial support for hypothesized relationships between the measures of human trafficking and hierarchical diffusion, social disorganization, and social disorder. Although specified relationships between human trafficking and residential mobility and family disruption; and, between migrant prostitution and residential mobility, family disruption, and GDP per capita are not supported in the bivariate analyses, considering the theoretical model and prior empirical evidence, all these independent variables and two other control variables are going to be retained in multivariate analyses.

(3) Multivariate Analysis

Multivariate analyses are aimed at estimating exploratory models for the distribution of human trafficking markets across 81 cities in Turkey. The preceding bivariate analyses evinced that hierarchical diffusion, social disorganization, and social disorder have considerable impact on the distribution of human trafficking markets in the hypothesized direction. Hence, the following multivariate analysis procedures mainly

attempt to model the impact of hierarchical diffusion, social disorganization, and social disorder on the distribution of human trafficking markets in Turkey.

In this regard, the first six models (Model 10 through Model 15) look into the impact of hierarchical diffusion and social disorganization on both measures of human trafficking and on migrant prostitution. Then, four additional models Model 16 through Model 19) are estimated to examine the impact of migrant prostitution on the distribution of human trafficking incidents, calls for rescue, total crime, and organized crime while controlling for the impact of hierarchical diffusion and social disorganization.

Negative Binomial Regression Model (NBRM)

A common analytical strategy in modeling the distribution of aggregate level crime rates is using least squares estimation procedures. Yet, as it is clear from the above presented descriptive statistics (Table 5), the distribution of the measures of human trafficking, migrant prostitution, total crimes, and organized crime incidents in Turkey are all highly skewed with no or rare incidents/calls/deportations/crimes in several cities. In this case, error distribution also becomes increasingly skewed because of rare and zero counts, which violates the OLS assumption of normal distribution of residuals especially in the cities with relatively less population. Moreover, if population based rates - instead of incident/call/deportation/crime counts- are used as dependent variables, Osgood (2000, 22-23) argued, precision of the estimated crime rates depends on the population size[9]. Thus, variation of population sizes across the provinces violates the OLS assumption of homogeneity of error variance by causing larger errors of prediction for crime rates (i.e.,

[9] To illustrate, while each additional count of incident/call/deportation/crime corresponds to half an incident/call/deportation/crime per 100,000 in a city with 200,000 population, it will correspond to .01 per 100,000 incident/call/deportation/crime in a city with 1,000,000 population.

per 100,000) based on smaller populations in the sample. Therefore, using linear regression models for counts of human trafficking incidents, calls for rescue, migrant prostitution, and total crime can result in inefficient, inconsistent, and biased estimates (Long, 1997, 217).

Given the shortcomings of the OLS regression models, Poisson based regression models are suggested as an alternative analytic approach for the analysis of discrete count data. The basic poisson regression model, however, assumes that events occur independently over time and it also has a restrictive distributional feature termed 'equidispersion', which means that the mean and variance of the distribution are the same. As far as the distribution of human trafficking, migrant prostitution, total crime, and organized crime in Turkey is concerned, occurrence of one may certainly precipitate additional trafficking/prostitution/crime incidents. Moreover, since the variation of these dependent variables exceed their means, using basic poisson model with this overdispersed data can result in underestimation of the standard errors of the coefficients and thus produce inefficient significance tests (Cameron and Trivedi, 1998).

Thus, instead of the basic poisson model, a variation of basic poisson model, the Negative binomial regression model (NBRM) is preferred for the analysis of the distribution of human trafficking, migrant prostitution, and total crime in Turkey. NBRM accommodates overdispersion by allowing a disturbance term (α) into the relationship between the regressors and outcome (DeMaris, 2004, 365). Simply put, whereas the basic Poisson model assumes that the variation in the expected count is caused by observed heterogeneity and different values of the parameters; in NBRM, variation in the predicted mean is assumed to be produced by both regressors and the residual variance parameter

(α) introduced into the model. Finally, even though NBRM is utilized to analyze count outcomes, when natural logarithm of population size is included in NBRM as an offset variable (with a fixed coefficient of one), per capita incidents/calls/deportations/crime rates become constant across provinces with different population sizes, controlling for other explanatory variables. Yet, when the impact of population size is estimated rather than fixed, as this is the case for the following models, a value of one should be subtracted from the coefficient of population size. Then, for the significance test, the estimated value of the coefficient should be compared to the value of one rather than zero (i.e., $b\text{-}1/SE_b$; Osgood, 2000, 39-40). This transformation, which can be thought of as equivalent to converting the counts to per capita rates, adjusts for the impact of population size and allows to control for the impact of population size.

Tables 8 and 9 present the results of NBR analyses for human trafficking incidents, calls for rescue, migrant prostitution, total crime, and organized crime in Turkey. Indications of model fit are based on minus two times the log likelihood (-2LL), spearman's correlation (r) between observed and predicted values (Osgood, 2000), and AIC statistic (Hilbe, 2007), which are provided for each individual model below. The significance test associated with -2LL is based on a likelihood test which compares the full model to base (intercept-only) model. Spearman r, on the other hand, demonstrates the success of the model in rank ordering the cities by incident/call/deportation/crime counts. AIC is the acronym for the Aikake Information Criterion, which is also based on log-likelihood function. Typically, the preferred model is the one with the lowest AIC statistic (Hilbe, 2007, 27). Although the interpretation of pseudo R^2 is not as straightforward as it is in an OLS model, the values of the same type of pseudo R^2

(McFadden's pseudo R^2) are included to provide information about the discriminatory power of different models. The significance test associated with "α" (the residual variance parameter), on the other hand, is based on a likelihood ratio test which tests that dispersion is equal to zero. Since absence of overdispersion would favor ordinary poisson regression model, a significant likelihood ratio test associated with α coefficient indicates that NBRM provides a better fit to data compared to PRM.

The first six models examine the impact of hierarchical diffusion and social disorganization on the distribution of human trafficking incidents, calls for rescue, and migrant prostitution as presented in Table 8.

As demonstrated in the Models 10, 12, and 14, presence of international borders in a city significantly increase per capita human trafficking incidents, calls for rescue, and migrant prostitution. Specifically, the cities with international borders have [$100*(e^{b}-1) =$ 988%] almost ten times more human trafficking incidents, 327% (three times) more calls for rescue, and 707% (seven times) more migrant prostitution compared to cities without international borders when only the indicators of hierarchical diffusion are entered into the models.

Although the size of the total population was almost the strongest predictor of all three outcomes in bivariate context, when the presence of international borders in a city is controlled, it does not have significant impact on the distribution of human trafficking incidents and calls for rescue. Unexpectedly, the size of population (ln) has a significant negative impact on migrant prostitution rate in a city controlling for the presence of international borders.

Table 8. Negative Binomial Regression Models for Human Trafficking and Migrant Prostitution (N=81)

Variable	Model 10 HT incidents B	Model 11 HT incidents B (N=81)	Model 11 HT incidents B (N=80)	Model 12 Calls for R. B	Model 13 Calls for R. B	Model 14 Mig.Prost. B	Model 15 Mig.Prost. B
Constant	-14.17***	-22.50**	-28.85***	-15.93***	-22.44***	-4.50	-12.55*
	(3.79)	(6.79)	(7.00)	(2.49)	(4.23)	(3.02)	(6.28)
Hierarchical Diffusion							
Total Population (ln)	-.07[b]	.22[b]	.53[b]	.19[b]	.48[ba]	-.57[b]*	-.29[b]
	(.29)	(.45)	(.44)	(.19)	(.27)	(.24)	(.43)
International Border	2.39**	1.03	2.51*	1.45***	.70*	2.09***	.74
	(.70)	(.71)	(1.13)	(.41)	(.35)	(.58)	(.67)
Social Disorganization							
GDP per capita	-	-.0004	-.0001[a]	-	-.0003	-	-.0003
		(.0004)	(.0004)		(.0003)		(.0004)
Heterogeneity (ln)	-	.63***	.78***	-	.53***	-	.78***
		(.17)	(.18)		(.10)		(.17)
Residential Mobility	-	.10	.14[a]	-	.12*	-	-.02
		(.08)	(.08)		(.05)		(.08)
Urbanization	-	-.51	-1.33	-	-1.91	-	.21
		(1.80)	(1.68)		(1.17)		(1.67)
Family Disruption	-	2.01	3.51	-	5.40[a]	-	7.70
		(5.08)	(.45)		(3.20)		(6.24)
Control Variables				-		-	
Population Aged 15-24 (%)	-	.21	.26	-	.06	-	.21
		(.17)	(.16)		(.09)		(.14)
Unemployment	-	.002	-.06	-	.06	-	.05
		(.13)	(.12)		(.07)		(.13)
-2LL	191.82***	178.38***	156.92***	323.86***	279.84***	467.96***	439.94***
Pseudo R^2	.12	.18	.26	.16	.27	.04	.10
α	3.62***	1.57***	1.01***	1.49***	.53***	4.20***	2.69***
AIC	2.47	2.47	2.24	4.10	3.72	5.88	5.70
Spearman r	.51***	.58***	.62***	.66***	.78***	.67***	.74***

Note: Numbers in parenthesis are standard errors; [a] p<.10; *p<.05; **p<.01; ***p<.001; [b] This is the value of population coefficient when it is fixed to 1 and compared to 1 rather than zero (= b-1/SE b)

Apparently, since human trafficking in Turkey exclusively involves foreigner women, rather than the size of the population of the cities, the presence of international borders becomes more important in terms of the distribution of migrant prostitution and human trafficking in Turkey. Once the indicators of social disorganization are also entered into the models 11, 13, and 15 together with the controls, however, the significant impact of the presence of international borders on migrant prostitution disappears. Yet, the presence of international borders still has a significant impact on human trafficking incidents (reduced model estimated with 80 cases) and calls for rescue.

Before going into the detailed interpretation of parameter estimates, it should be noted that diagnostic procedures using residual analyses based on standardized deviance values indicated that -whereas model 13 and 15 fitted the data well (with standardized deviance values in the range of -3 to 3), in the model 11, the 23^{rd} case turned out to be a potential outlier with a deviance value of 3.30, although it does not have significant influence on parameter estimates as its leverage is lower than the critical value of .33 (3p/n) as suggested by Cameron and Trivedi (1998). Therefore, an alternative model is estimated with 80 cities by dropping this potential outlier and the results presented next to the full model under Model 11. Standardized deviance values in this reduced model are in the acceptable range of -3 to 3 with most of the values less than 2. Comparison of AIC and α statistics as well as spearman correlation values across the full and reduced models demonstrated that the reduced model fits the data better with relatively more discriminatory power (R^2=.26). Thus, although the cities with international borders do not have significantly more human trafficking incidents in the full Model 11, in the reduced model, the cities with international borders have 1128% (or almost 11 times)

more human trafficking incidents compared to cities without migrant prostitution. The cities with international borders also have 103% more per capita rescue calls (Model 13) compared to cities without international borders controlling for remaining independent and control variables.

As for the impact of social disorganization; poverty ($p<.10$), heterogeneity (ln), and residential mobility all have significant impact on human trafficking incidents in the expected direction in the reduced model, though heterogeneity was the only explanatory variable that had significant impact in the full model 11. Specifically, in the reduced model, one standard deviation increase in gdp per capita leads to 42% decrease in human trafficking incidents whereas one standard deviation increase in heterogeneity (ln) and residential mobility corresponds to 248% and 83% increase in human trafficking incidents respectively. As for rescue requests, in addition to the presence of international borders, the size of total population ($p<.10$), residential mobility, and family disruption ($p<.10$) also have significant positive impact on the distribution of per capita calls for rescue controlling for other independent and control variables. To be more specific, each standard deviation increase in population (ln), residential mobility, heterogeneity (ln), and family disruption corresponds to 51%, 68%, 132%, and 38% increase in per capita calls for rescue respectively. On the other hand, heterogeneity (ln) is the only significant predictor of per capita migrant prostitution in a city. One standard deviation increase in heterogeneity results in corresponding 119% increase in migrant prostitution rates. Hence, social disorganization also seems to have significant impact on the distribution of human trafficking incidents, calls for rescue and migrant prostitution while controlling for the impact of hierarchical diffusion and control variables.

Table 9. Negative Binomial Regression Models for Human Trafficking, Total Crime, and Organized Crime (N=81)

	Model 16 Trafficking Incidents '06		Model 17 Calls for Rescue '06	Model 18 Public Order Crimes'05	Model 19 Organized Crime '05
	N=81	N=80			
Variable	B (S.E.)	B (S.E.)	B (S.E.)	B (S.E.)	B(S.E.)
Constant	-22.71***	-28.32***	-21.19***	-4.77***	-9.47*
	(6.17)	(6.19)	(3.90)	(1.20)	(3.90)
Hierarchical Diffusion					
Total Population (ln)	.27	.48	.41[a]	-.02	-.12
	(.42)	(.38)	(.24)	(.09)	(.25)
International Border	1.18[a]	2.75*	.69*	.14	.72*
	(.68)	(1.16)	(.33)	(.11)	(.34)
Social Disorganization					
GDP per capita	-.0004	-.0006[a]	-.0002	.0002*	.0006**
	(.0004)	(.0003)	(.0002)	(.0001)	(.0002)
Heterogeneity (ln)	.30	.45*	.36**	-.05	-.18
	(.18)	(.18)	(.11)	(.04)	(.11)
Residential Mobility	.14*	.18**	.11*	-.007	.009
	(.07)	(.07)	(.05)	(.01)	(.05)
Urbanization	.17	-.50	-1.46	1.82***	1.76*
	(1.65)	(1.51)	(1.06)	(.36)	(.91)
Family Disruption	2.82	4.29	5.11[a]	-.07	-.54
	(4.18)	(3.91)	(2.80)	(1.06)	(2.51)
Social Disorder					
Migrant Prostitution Rate (ln)	.61**	.51**	.35**	.23**	.34*
	(.21)	(.19)	(.13)	(.07)	(.17)
Control Variables					
Population Aged 15-24 (%)	.12	.18	.03	-.04	-.20*
	(.15)	(.15)	(.09)	(.03)	(.09)
Unemployment	-.05	-.08	.05	-.07***	-.03
	(.11)	(.12)	(.07)	(.02)	(.06)
-2LL	170.48***	150.61***	273.24***	1354.46***	238.68***
Pseudo R^2	.22	.29	.29	.04	.14
α	.89***	.51***	.37***	.16***	.28***
AIC	2.40	2.18	3.67	17.02	3.24
Spearman r	.59***	.64***	.80***	.92***	.73***

[a] p<.10; *p<.05; **p<.01; ***p<.001

The final four models, Model 16, 17, 18, and 19 (Table 9) examine the relationship between migrant prostitution and the distribution of human trafficking, total crime, and organized crime in Turkey while controlling for the impact of hierarchical diffusion, social disorganization, and control variables. It should be noted that instead of

migrant prostitution counts across the cities, migrant prostitution rate per 100,000 population was used as an explanatory variable in the following models. Moreover, because of severe positive skewness (Pridemore and Freilich, 2006; West et al., 1995) in migrant prostitution rates across the provinces, natural log transformation was performed for this variable after adding 1 to the cities with 0 cases of migrant prostitution as the log of 0 is undefined (Osgood, 2000).

As hypothesized, migrant prostitution has significant positive impact on all four outcomes. Specifically, one standard deviation increase in migrant prostitution results in 70% increase in human trafficking incidents (or 57 % increase in the reduced model with 80 cases), 36% increase in calls for rescue, 21% increase in total crime, and 34% increase in organized crime. In more practical terms, based on the final three models, a 10% increase in migrant prostitution leads to 6.2% increase in human trafficking incidents (or 5.2 % increase in the reduced model with 80 cases), 3.6 % increase in calls for rescue, 2.3 % increase in total crime, and 3.5 % increase in organized crime incidents in a city when all other parameters in the models are held constant[10].

Apart from the significant positive impact of migrant prostitution on all four outcomes, cities with international borders ($p<.10$) and more residential mobility appear to have more human trafficking incidents (Model 16). Yet, residual analyses based on standardized deviance values indicated that once again, the 23rd case turned out to be a potential outlier in the full model 16, although its influence on parameter estimates was

[10] An increase of x in an explanatory variable multiplies the fitted mean incident/call/crime rate by e^{bx} (Osgood, 2000, 39).

not significantly high[11]. Therefore, an alternative model is estimated with 80 cities by dropping this potential outlier and the results of this reduced model presented next to the full model under Model 16.

In addition to the significant impact of the presence of international borders, residential mobility, and migrant prostitution in the full model, heterogeneity and gdp per capita also have significant impact on human trafficking incidents in the expected direction in this reduced model. Comparison of AIC and α statistics as well as spearman correlation values across full and reduced models also indicate that the reduced model fits the data better with relatively more discriminatory power (R^2=.29).

As far as calls for rescue are concerned, the cities with international borders and more population ($p<.10$), heterogeneity, residential mobility, and family disruption have more calls per capita (Model 17).

For total crime, the cities with more income, urbanization, and less unemployment appear to have more total crime. Even though the positive relationship between per capita gdp and total crime as well as the negative relationship between unemployment and total crime appears to be counterintuitive considering what is expected from social disorganization perspective; given Bursik and Grasmick's (1993) argument about the relationship between social disorganization theory and routine activities theory as regard

[11] Standardized deviance values were within the acceptable range in the models 17, 18, and 19 since they are less than 3 and even lower than 2 for most of the cases. For the model 16, however, only one case, that is, case number 23 turned out to be a potential outlier since its standardized deviance was 3.22. Therefore an additional model is estimated with 80 cases by dropping out case 23, although its leverage (.05) was less than the critical value of .37, which is equal to three times the number of parameters divided by the number of observations (3p/n) as suggested by Cameron and Trivedi (1998). Moreover, potential problems of multicollinearity across all models were also investigated using OLS estimation procedures. All VIF scores are lower than the critical limit of 10 suggested in the literature (Gujarati 2003; Neter, Wasserman, & Kutner, 1990; DeMaris, 2004). For the models 16 (both reduced and full models), and 17 the average VIF score is 2.02 with a maximum VIF score of 2.65 for total population.

to both theories' focus on social control and guardianship, it can be speculated that cities with more income and thus relatively more social and financial interaction could increase the crime rate because of increased residential and commercial use of land. Put differently, the cities with more income and relatively more social and commercial interactions can be considered as attractive places especially for property crime and disaggregated measures of public order crime rates, such as separate violent and property crime rates across the cities might help to better address this relationship. Increased unemployment, on the other hand, would decrease such interactions and also increase the guardianship back at home or in the neighborhood. In fact, the significant positive impact of urbanization on public order (total) crimes also supports such argument in that urbanization would also decrease guardianship and control by increasing anonymity because of ebb and flow of workers, visitors, foreigners into these cities.

Finally, as expected, organized crime is influenced by almost the same factors as total crime, for organized crime also prevails in the cities with higher industrialization and urbanization. The results also concur with Finckenauer and Voronin's (2001) argument as regard to the distribution of organized crime in that as they suggested, the cities with international border gates, higher income and urbanization also have more organized crime incidents. On the other hand, the proportion of younger population has an unexpected negative impact on the distribution of organized crime incidents in Turkey. This unexpected finding might have emerged as a result of the fact that even though younger people are generally known to be more likely to offend and victimized, a significant proportion (96 %) of the members of criminal organizations arrested in Turkey in recent years was 21 years old or older (KOM, 2002). Thus, a larger proportion

of younger population in a city may have negative impact on establishment and activities of criminal organizations through its negative impact on recruitment by these organizations.

Based on afore provided information about model selection and fit considerations, whereas the models of hierarchical diffusion (Model 10, 12, and 14) produce limited information about the distribution of human trafficking and migrant prostitution in Turkey; in general, inclusion of social disorganization and disorder measures as well as of control variables provides better fit to data in the Models 11, 13, 15, 16, and 17. All ten models significantly contribute to our understating about the distribution of human trafficking markets and other serious crimes in Turkey (as opposed base/intercept-only models) and significant alpha (α)coefficient in all models demonstrate that NBRM provides a better fit as opposed to PRM because of overdispersion present in the data. As far as fit statistics are concerned, however, the final four full models which consider the impact of all three factors (diffusion/disorganization/disorder) and controls appear to be better in explaining the distribution of human trafficking and other crimes in Turkey. Spearman correlation statistics, on the other hand, favor the Model 17 in terms of its success in rank ordering the cities as regard to the distribution of per capita calls for rescue.

Overall, all three approaches, that is, hierarchical diffusion, social disorganization, and disorder significantly contribute to our understanding of the distribution of human trafficking in Turkey as supported by both bivariate and multivariate analyses.

The impact of each approach summarized in Table 10 by referring back to the models 15, 16, 17, 18, and 19. This table is also intended to provide information about

specified hypotheses as to whether they are supported/accepted (A) or rejected (R) in the multivariate context based on the information from the full models of human trafficking, migrant prostitution, total crime, and organized crime. For migrant prostitution, Model 15 only provides partial support for social disorganization (H_{3b}) and no support for hierarchical diffusion. In this model, heterogeneity (ln) is the only significant factor that influences the distribution of migrant prostitution in Turkey controlling for other indicators.

Table 10. Summary of Findings

Variable	Model 15 *Migrant Prost. '03*	Model 16 *HT Inc. '06*	Model 17 *Calls for Rescue '06*	Model 18 *Total crime '05*	Model 19 *Organized crime '05*
Hierarchical Diffusion					
Total Population (ln)	N (H_{2a}/R)	N (H_{2a}/R)	S[a] (H_{2a}/A)	N	N
International Border	N (H_{2b}/R)	S[a] (H_{2b}/A)	S* (H_{2b}/A)	N	S*
Social Disorganization					
GDP per capita	N (H_{3a}/R)	N (H_{2c}/A[b])	N (H_{2c}/R)	S*	S**
Heterogeneity (ln)	S*** (H_{3b}/A)	N (H_{2d}/A[b])	S** (H_{2d}/A)	N	N
Residential Mobility	N (H_{3c}/R)	S* (H_{2e}/A)	S* (H_{2e}/A)	N	N
Urbanization	N (H_{3d}/R)	N (H_{2f}/R)	N (H_{2f}/R)	S***	S*
Family Disruption	N (H_{3e}/R)	N (H_{2g}/R)	S[a] (H_{2g}/A)	N	N
Social Disorder					
Migrant Prostitution Rate	-	S**(H_{3f}/A)	S** (H_{3f}/A)	S** (H_{3j}/ A)	S*(H_{3k}/A)
Control Variables					
Population Aged 15-24 (%)	N	N	N	N	-S*
Unemployment	N	N	N	-S***	N

[a] p.<10, *<.05, **p<.01, ***p<.001; N=Nonsignificant, S=Significant, A=Accepted, R=Rejected.

[b] Note: These two hypotheses are supported in the reduced model 16 estimated with 80 cases.

Provincial distribution of both measures of human trafficking, on the other hand, is well explained by all three approaches in the hypothesized direction. Model 16 supports the hypotheses H_{2b}, H_{2c}, H_{2d}, H_{2e}, and H_{3f} whereas Model 17 lends support for the hypotheses H_{2a}, H_{2b}, H_{2d}, H_{2e}, H_{2g} and H_{3f}. Thus, hypothesized relationships between the distribution of human trafficking markets and hierarchical diffusion, social disorganization, and disorder were supported in these two models. Finally, significant positive impact of migrant prostitution on total crime and organized crime lends support for the hypotheses H_{3j} and H_{3k} respectively.

Summary of Findings

The findings presented in this chapter provide considerable support for all three major research questions as regard to the cross-national distribution of human trafficking; distribution of human trafficking markets in Turkey; and the impact of migrant prostitution on the distribution of human trafficking markets in Turkey.

OLS and OLR models for cross-national distribution of human trafficking indicate that poverty, the size of the total population (ln), and urbanization have significant positive impact on the distribution of human trafficking markets across the sample of 53 countries. The proportion of younger population in a country (proportion of population aged 15-19), however, has significant negative impact on cross-national distribution of human trafficking. The same indicators significantly impact human trafficking from a country and to a country as well as total human trafficking in a country, though the impact of urbanization depends on the age cohort of the younger

population included in the models – especially in the final OLR model (Model 9) in which it does not have a significant impact on human trafficking to a country at all.

NBR models for the distribution of human trafficking markets in Turkey demonstrate that Hierarchical diffusion, social disorganization, and social disorder are all significantly related to the distribution of human trafficking Markets in Turkey (Table 9). While the presence of international borders, heterogeneity (ln), residential mobility, and migrant prostitution (ln) have significant positive impact on human trafficking incidents; as expected, per capita gdp has significant negative impact on human trafficking incidents. On the other hand, cities with international borders, larger population, higher heterogeneity (ln), residential mobility, family disruption, and migrant prostitution have significantly higher number of calls for rescue. Finally, migrant prostitution has a significant positive impact on per capita total crime rates and organized crime incidents controlling for the impact of social disorganization and control variables.

The following chapter is going to provide an extended discussion about the results of bivariate and multivariate analyses presented in this chapter. Limitations and the implications in both theoretical and practical terms are also going to be mentioned along with suggestions for future research.

CHAPTER SIX

DISCUSSION and CONCLUSION

1. Discussion

This study revolves around three major research questions as regard to the distribution of human trafficking markets. Fist, the impact of macro level structural factors on cross-national distribution of human trafficking markets has been examined with a specific focus on the impact of globalization and social disorganization. Then, the role of hierarchal diffusion and social disorganization in explaining the distribution of human trafficking markets in Turkey is inspected. Finally, this study also sought to discover the impact of social disorder on the distribution of human trafficking markets and other serious crime by looking at the relationship between migrant prostitution and the measures of human trafficking, violent crime, property crime, total crime, and organized crime in Turkey.

Analysis of cross-national distribution of human trafficking markets utilizes the measure of human trafficking across the world nations provided by Bales (2005). In the current study, however, operationalization of human trafficking in a country differs from what is suggested by Bales's study (2005). Moreover, estimated models are mainly based on theoretical concepts suggested by communities and crime research literature. Investigation of human trafficking in Turkey and the impact of migrant prostitution on the distribution of human trafficking and other serious crime, on the other hand, is guided by hierarchical diffusion and social disorganization frameworks, as suggested by Rengert (1996) and the research literature on the distribution of illegal markets (i.e., drug and prostitution) and serious crime.

This chapter is intended to discuss all three research questions based on the findings presented in the previous chapter and also in comparison to findings of previous research including the recent findings in human trafficking and communities and crime research literature. In the end, limitations and implications for policy and future research are also discussed.

(1) Cross-national Distribution of Human Trafficking Markets

Macro structural factors such as poverty, heterogeneity, residential mobility, urbanization, and family disruption were hypothesized to influence cross-national distribution of human trafficking markets when relative deprivation and proportion of younger population in a country is controlled. Not surprisingly, the results indicate that absolute poverty (or what we can also call the level of development in the course of this study), urbanization, and the size of total population have significant positive impact on cross-national distribution of human trafficking. The proportion of younger population, on the other hand, has an unexpected significant negative impact on cross-national distribution of human trafficking markets. The remaining independent variables of residential mobility, heterogeneity, family disruption and control variable of gini coefficient (as the measure of relative deprivation), however, do not have significant impact on cross-national distribution of human trafficking markets.

In general, the findings concur with the notion that rapid industrialization and related urbanization is problematic especially for the countries/communities which are deprived of necessary resources to address the problems of crime and social disorder (Paulsen and Robinson, 2004). In this regard, the process of globalization and related transformations in developing countries play a significant role in shaping cross-national

distribution of human trafficking. Simply put, human traffickers target the nations with relatively more poverty, urbanization, and population since it is easier to exploit and recruit more potential victims for more potential customers in a social and economic context where potential victims are more likely to risk their lives for 'so called' better employment and living opportunities in metropolitan centers (in their or neighboring countries); and, where both the traffickers and their customers, on the other hand, can benefit from increased anonymity and lack of informal and formal social controls. Even though social disorganization theory mainly focuses on informal social controls, the systemic control interpretation of the disorganization framework refers to public level control (i.e., law enforcement) as one of the most important yet under-tested components of community control (Bursik and Grasmick, 1993). Accordingly, given that per capita GDP is also considered as an indicator of the quality of government institutions such as police and justice systems (Lederman, Loayza, and Menendez, 2002), lower level of per capita GDP can also benefit to traffickers in this respect.

Despite the significant positive impact of poverty, urbanization, and the size of total population on cross-national distribution of human trafficking markets, heterogeneity, residential mobility, and family disruption do not have significant impact on cross-national distribution of human trafficking markets. Even though this seems to be contrary to theorizing, certain characteristics of human trafficking markets and specifically of the recruitment of victims can help to explain these unexpected findings. Namely, given the fact that a considerable number of victims are recruited by their significant others including their relatives, friends, and even parents (Brunovskis & Tyldum 2004; INCIDIN, 2002), it can be speculated that this would require development

of certain level of trust between the traffickers/recruiters and their victims. Yet, heterogeneity, higher residential mobility and family disruption in the society would prevent the development of such informal relationships/networks and interactions that could benefit to the traffickers and recruiters. In fact, the unexpected significant negative impact of the younger cohort (aged between 15-19) on cross-national distribution of human trafficking can also be regarded as supporting evidence for this argument since the countries with large proportion of younger population would be the ones with less intimate ties (because of relatively less number/proportion of adult population). Actually, the negative impact of the proportion of younger population on the distribution of crime rates has received empirical support from both previous (Bennett 1991) and recent (Lee and Bartkowski, 2004; Lee, 2006) studies on the distribution of crime rates at different levels of analysis.

Afore mentioned results apply to the full model of human trafficking in a country in which a combined measure of human trafficking from and to a country was used. Yet, the same set of indicators also appears capable of explaining the distribution of human trafficking from and to world nations separately. Specifically, whereas exactly the same indicators that predict total trafficking in a country also significantly predict human trafficking from a country; urbanization is dropped from the final OLR model (Model 9) that examines human trafficking to a country. In other words, only poverty, total population, and proportion of younger population have significant impact on human trafficking to a country. There are two main reasons for why significant positive impact of urbanization might be more relevant in an origin country (or for 'human trafficking

from a country' to another country) when human trafficking in a country is disaggregated into two separate incidents as human trafficking from and to a country:

First, urbanization is likely to increase the number of potential targets who are willing to risk their lives for presumed better living and employment opportunities in unguarded urban areas in origin countries. As far as the destination countries (or trafficking to a country) are concerned, they are assumed to be targeted mainly for the purposes of exploitation of the victims those who are already recruited from an origin country. In this case, higher population and poverty in the destination countries would provide anonymity and lack of informal and formal social controls as desired by the traffickers in a destination country.

The second reason for the non-significant impact of urbanization on human trafficking to a country, on the other hand, can relate to the different market solutions adopted by illegal markets, which can also account for the negative impact of the proportion of younger population on human trafficking to a country. There are two major solutions adopted by illegal markets in an effort to avoid apprehension by police, prevent violence and theft, and increase the monetary return; routine activity markets and network solutions (see Eck, 1995, 67). When the market adopts network solutions at the retail level, which is likely to be the case for the exploitation of victims in destination points, they are more likely to spread out a large geographic area compared to routine activity markets (Eck, 1995, 74). Therefore, as long as traffickers are able to operate in a destination country where they can benefit from anonymity and lack of informal and formal social controls -as suggested by larger population and higher poverty-, urbanization may not have a significant impact on human trafficking to a country

especially when the traffickers adopt network solutions and prefer to spread out a large geographic area to prevent detection. Additionally, urbanization would impair development of a secure informal network between the traffickers and their customers. The negative impact of the proportion of younger population on trafficking to a country may also support this argument about network solutions. As mentioned, a larger proportion of younger population would mean lower levels of integration and interaction because of decreased adult population. When it is implemented by traffickers, however, network solutions would require traffickers to serve to the people whom they know and trust, which in turn would necessitate development of informal networks and intimate relationships between the traffickers and their customers-which again, might be more difficult in an urban context.

To sum up, the results from the analysis of cross-national distribution of human trafficking markets concur with the results of Bales's multiple regression analysis of human trafficking from and to countries to some extent[12]. Bales found that prosperity and stability had significant positive impact on human trafficking to a country whereas they were negatively related to trafficking from a country. Accordingly, he argued that the level of development and stability significantly determine the route of human trafficking across the countries. However, in the sample of 53 countries used in this study, once

[12] Given that the current study applied almost completely different theoretical framework from the one used in Bales' (2005) research and thus conceptualized human trafficking and its correlates quite differently; it would not be appropriate to expect the results to be in complete agreement with the results of Bales' (2005) study. One of the important variables that is used in Bales' (2005) study but omitted in the present research was corruption. The corruption index was intended to be included as a control variable in this study as well; however, the correlation between gdp per capita and corruption index was .88 ($p<.01$). Therefore, concern about potential multicollinearity among these two aggregated measures in a small sample was the major reason for the exclusion of corruption from the multivariate analysis. High bivariate correlation between gdp per capita and corruption, on the other hand, supports the notion that gdp can be considered as "...a proxy for the quality of government institutions, including the police and justice systems" (Lederman, Loayza, and Menendez, 2002, 511). Consequently, in addition to theoretical justifications, such analytical issues should also be considered while trying to compare both studies.

human trafficking is constructed as an aggregated measure of human trafficking from and to a country, reasonably, prosperity or development in a given country impacts the level of total trafficking rather than the route of trafficking. Moreover, the full model of human trafficking in a country (Model 6) can also account for human trafficking in either direction when human trafficking is disaggregated as human trafficking from and to countries.

Thus, utilizing a sample of 53 countries and borrowing from communities and crime literature and international migration theories, the present study extends Bales's (2005) argument about cross-national distribution of human trafficking markets in both theoretical and methodological terms. Methodologically, the tested models indicated that human trafficking from and to a country can be considered as a part of the same construct. Theoretically, the problem of human trafficking across the world nations is well explained by criminological insights drawn from social disorganization and related systemic control framework using an available sample of 53 countries and Bales's measurement of human trafficking to and from world nations.

(2) Human trafficking in Turkey

Analysis of human trafficking in Turkey sought to explore the impact of hierarchical diffusion, social disorganization, and migrant prostitution on the distribution of human trafficking markets across 81 cities. Moreover, the relationship between migrant prostitution, which is considered as a sign of social disorder, and other serious crimes is also examined. All three different frameworks significantly contribute to our understanding of the distribution of human trafficking markets in Turkey, though their contribution does not remain the same across different models.

Hierarchical Diffusion:

The organization of human trafficking markets in Turkey is best interpreted in the light of theoretical insights drawn from Rengert's (1996) study on hierarchical diffusion of illegal drug markets in the U.S. Originally, the size of population and geographic proximity to established illicit markets or to the places were the illicit commodities are imported were suggested as two main factors that impact the distribution of illicit drug markets in time and space. Whereas the larger cities contain more potential customers than smaller urban centers, the cities closer to the places where illicit products are produced or imported decrease the costs by minimizing the distance between origin countries and the markets. As applied to this study, the size of the total population and the presence of international borders in a city were hypothesized to increase the number of human trafficking markets since human trafficking in Turkey almost exclusively involved sexual and/or labor exploitation of foreigner women (IOM, 2006; see www.countertrafficking.org).

As expected, when these two indicators of hierarchical diffusion are entered into the models (10, 12, and 14), the presence of international borders had considerable positive impact on the distribution of human trafficking markets in Turkey. Similar to the diffusion of illegal drug markets in the U.S. (Rengert, 1996), human trafficking markets are concentrated in the cities with international borders where it is easier to transport and recruit trafficked women into exploitation immediately. The size of the population, on the other hand, did not have significant impact on the measures of human trafficking whereas it had significant negative impact on migrant prostitution when the presence of international borders and control variables held constant. This may be caused by the

relationship between the size of total population and one or more of omitted independent variables which are included in successive models, for correlations between the size of total population and other independent variables (i.e., negative correlation between total population and residential mobility and positive correlation between total population and per capita GDP) might suppress the relationship between total population and the measures of human trafficking and migrant prostitution -unless they are controlled.

Social Disorganization

The hierarchical pattern of diffusion observed in the distribution of organized criminal activity in human trafficking markets is mainly driven by profit-oriented concerns in legal markets. However, the lack of legal protection within the illicit markets forces organized criminals to consider additional precautions which in turn impact their market location preferences and thus distribution of illegal markets in space and time. Simply put, to avoid apprehension by police, to prevent violence and theft, and to increase the monetary return, Rengert (1996) contended, organized criminals target the places whose residents are too disorganized to confront the operation of illegal markets in their community. Thus, drawing upon communities and crime literature and specifically assumptions of Shaw and McKay's (1972) social disorganization framework; first, poverty, heterogeneity, residential mobility, urbanization, and family disruption were hypothesized to have significant positive impact on the distribution of migrant prostitution and human trafficking markets, for these independent variables are considered as classical antecedents of community social disorganization. Second, given recent arguments as regard to the impact of social disorder on the distribution of serious crime (Weisburd and Green-Mazerolle, 2000; Worrall, 2006) and considering the fact

that prostitution is also regarded as a sign of social (and physical) disorder (Skogan, 1990; Taylor, 1995); migrant prostitution was also hypothesized to have significant positive impact on the distribution of human trafficking markets as well as on the distribution of violent, property, and total crime rates.

As expected, social disorganization had significant positive impact on the distribution of human trafficking and migrant prostitution when the indicators of hierarchical diffusion, proportion of the younger population (aged 15-24), and unemployment are held constant. While heterogeneity emerged as the only factor that significantly increases per capita migrant prostitution rates across the cities (Model 15), presence of international borders, poverty, heterogeneity, and residential mobility had significant impact on the distribution of human trafficking incidents. Finally, the size of total population, presence of international borders, heterogeneity, residential mobility, and family disruption had significant positive impact on the distribution of per capita calls for rescue in a city. Thus, even though the distribution of migrant prostitution provided partial support for theorizing, distribution of human trafficking incidents and calls for rescue produced substantial empirical support for hypothesized relationships based on hierarchical diffusion and social disorganization frameworks since both frameworks significantly explain the distribution of human trafficking incidents and calls for rescue in the expected direction.

Limited partial support provided by the distribution of migrant prostitution for theorizing may be related to the nature of this outcome variable. Specifically, the events or individuals that come to police attention also depend on the discretion and performance of the police organization. Thus, the measures of both human trafficking

incidents and migrant prostitution might have the confounding impact of police discretion and performance (Hagan, 2006), although human trafficking incidents provided a relatively better fit. Calls for rescue, on the other hand, can be considered more adequate indicator of the distribution of human trafficking markets as these calls are made not only by the victims themselves, but also by the relatives, friends, customers, or neighbors of the victims. To be more precise, calls for rescue refer only to the calls which are considered as potential cases of human trafficking with enough information. Although a total of 579 calls for rescue were placed during the entire period of 2006, only 112 victims among a total of 246 victims (rescued by law enforcement) were rescued through 157 helpline in 2006. Hence, given the fact that only 19 percent of all rescue requests (112 out of 579) directed to the law enforcement authorities result in identification and rescue of the victims, compared to identified human trafficking incidents reported by law enforcement, calls for rescue appear to be more accurate representation of human trafficking markets in a province.

Thus, as long as human trafficking incidents and per capita calls for rescue are regarded as the measures of organized criminal activity within human trafficking markets; both hierarchical diffusion and social disorganization frameworks are relevant in explaining the distribution of human trafficking markets across 81 cities in Turkey. That is, the cities with international borders, larger population, more poverty, heterogeneity, residential mobility, and family disruption are exploited more by organized criminals running human trafficking markets. Simply put, these provinces provide more conducive context for the traffickers, where they can easily recruit their victims for more potential customers with less concern about informal and formal controls and about reaction from

the local community. The significant positive impact of heterogeneity on migrant prostitution, on the other hand, suggests that communities with higher heterogeneity would be less likely to confront the problem of migrant prostitution or other types of social disorder since they would be less likely to reach consensus about their common problems and their solution.

Overall, the significant positive impact of hierarchical diffusion and social disorganization on the distribution of human trafficking markets supports Rengert's (1996) argument as regard to the distribution of illicit markets in space. Namely, human trafficking markets, like their legal counterparts, seek to increase their profits by targeting the places with more potential customers and with shorter distance to countries where trafficked women are recruited from. Yet, as Rengert (1996) argued, illicit markets differ from the legal markets in terms of their concerns about legal protection and therefore they limit their market selection to the places where they can have more control over their operations and illegal exchanges.

(3) Migrant prostitution, Human Trafficking, and other Serious Crimes

Communities and crime research literature suggests a positive relationship between social disorganization, disorder, and more serious crime (Wilson and Kelling, 1982; Skogan, 1990). As mentioned, the distribution of migrant prostitution in Turkey has provided partial support for the social disorganization framework. Accordingly, migrant prostitution is conceptualized as a sign of social disorder in this final part of the study and it is hypothesized to have significant positive impact on the distribution of human trafficking, violent crime, property crime, total crime, and organized crime rates in Turkey.

Bivariate analyses demonstrated that the cities with migrant prostitution have significantly more average violent crime, property crime, and total crime in a given year. Moreover, the same cities also have significantly more human trafficking incidents, total crime, and organized crime in the following years as well (Table 7). As expected, migrant prostitution also had significant positive impact on the distribution of human trafficking incidents, calls for rescue, total crime, and organized crime net for the impact of hierarchical diffusion, social disorganization, and other controls in the multivariate context (Models 16, 17, 18, and 19). To be more precise, when migrant prostitution is introduced into previous models with hierarchical diffusion, social disorganization, and control variables, it is found that more human trafficking incidents take place in the cities with international borders, more poverty, more residential mobility, more heterogeneity, and with more migrant prostitution. As for calls for rescue, the cities with international borders, more population, heterogeneity, residential mobility, family disruption, and more migrant prostitution have more per capita calls for rescue. Finally, migrant prostitution also had significant positive impact on the distribution of total crime and organized crime incidents in the year 2005 when social disorganization and other control variables held constant.

Overall, as a single and official indicator of community social disorder, migrant prostitution had significant impact on the distribution of human trafficking, violent crime, property crime, total crime, and organized crime incidents in the hypothesized direction. Both measures of human trafficking in the final models (Models 16 and 17) demonstrated that all three frameworks of hierarchical diffusion, social disorganization, and disorder significantly contribute to our understanding of the distribution of human trafficking

markets in Turkey. The final two models (Model 18 and 19) also points to the ability of migrant prostitution in explaining the distribution of serious crimes as a sign of social disorder. Moreover, these final two models also help to clarify a legitimate concern about whether concentration of human trafficking, migrant prostitution, and other serious crime result from uneven distribution of crimes across the cities. Apparently, whereas the distribution of human trafficking incidents and calls for rescue are determined by quite similar processes of hierarchical diffusion and social disorganization, the distribution of total crime and organized crime is determined by different factors such as higher income level, higher urbanization, and migrant prostitution.

2. Conclusion and Policy Implications

The primary purpose of this dissertation has been to investigate how macro level structural factors, social disorganization and hierarchical diffusion, and social disorder impact the distribution of human trafficking markets. Based on three major research questions and related hypotheses derived from international migration studies and communities and crime research literature; the analyses of human trafficking markets in 53 countries and then in 81 cities in Turkey demonstrated that certain macro level structural factors, social disorganization and hierarchical diffusion, and finally social disorder all have significant influence on the distribution of human trafficking markets in the hypothesized direction.

The results of the analyses of the cross-national distribution of human trafficking markets identify poverty, urbanization, total population size, and the proportion of younger population as the most significant factors that determine human trafficking in a country. Moreover, except for urbanization, the same factors also determine human

trafficking from and to a country as well. The failure of heterogeneity, residential mobility, and family disruption can arise mainly from two potential issues. First, despite Bales's and his colleagues' extensive efforts to increase the validity of the measurement of human trafficking to and from different countries; since they also rely on different formal and informal resources in their measurement, the hidden nature of crime and related under-representation of human trafficking in certain countries is likely to bias final country ratings. If the countries with higher heterogeneity, residential mobility, and family disruption are underrated, this might cause non-significant relationship between these structural characteristics and human trafficking in a country and this possibility needs to be explored before ruling out the importance of these three explanatory variables. This does not seem to be the case for the measures of poverty, urbanization, total population, and proportion of younger population, however, as they have consistent significant impact across different measures of human trafficking. A second problem is that in order to increase the sample size, because of the scarcity of information about different structural characteristics of the nations, only crude measures of heterogeneity, residential mobility and family disruption are included in this study and their adequacy for cross-national comparisons needs to be more fully established with future research.

Overall, the analyses of human trafficking markets across 53 countries supported the notion that as the nations become more connected in both social and financial terms within the process of globalization, rapid industrialization and urbanization produce a conducive context for the traffickers where they can prey on higher numbers of potential victims who are suffering from poverty and looking for better employment and living opportunities in unguarded urban locations. Additionally, intimate relationships among

the adult population and specifically between the traffickers and potential victims are also speculated to be important in determining the level of human trafficking in a country. Put differently, higher levels of poverty and urbanization in especially largely populated countries increase both recruitment and exploitation of potential victims as these countries lack in necessary informal and formal control mechanisms to help their citizens to confront organized criminals and their illegal exchanges within human trafficking markets. Finally, as a possible interpretation of an unexpected negative relationship between the proportion of younger population and human trafficking in a country; the lower proportion of younger population (aged 15-19) and correspondingly higher number of adult population in a country may serve for both recruitment and exploitation purposes of the traffickers as human trafficking markets also thrive on intimate relationships and informal networks because of their major concerns about building trust relationships and avoiding the potential risk of apprehension and violent and property crime.

Apparently, even though recent empirical studies and government reports in the field of human trafficking generally prioritized and suggested the deterrence of traffickers as a major strategy to prevent human trafficking; the current study points to the importance of certain structural factors that basically form the context in which such deterrence oriented policies (would) take place. To be more specific, even though general and specific deterrence could contribute to prevention efforts, structural characteristics of the nations precede volunteered or forced prevention efforts against human trafficking markets (in time). Accordingly, any global, regional, or national level policy initiative to confront organized criminals within human trafficking markets should first consider structural characteristics of the nations as certain characteristics (once again, poverty,

urbanization, the size of the total population, and proportion of the younger population) have significant impact on the distribution of human trafficking markets. This would apply to both origin and destination countries, as estimated models produced similar results for human trafficking in, from, and to a country.

Consequently, this study can help to identify the countries that are at relatively more risk of being targeted by human traffickers. Thus, international community, governments, governmental and non-governmental organizations, activists, and law enforcement agencies can allocate their resources to prevent human trafficking in and across the world nations accordingly. Given that the countries with more poverty, urbanization, and larger population are at more risk, prevention strategies that fail to address the problem of absolute poverty and that unable to provide better living and employment opportunities are unlikely to be successful and may even be counterproductive by displacing human trafficking across time and/or places. Additionally, poor people are recruited by the traffickers who are able to operate in multiple countries through their cross border connections and this definitely calls for international cooperation among the law enforcement authorities. However, given that human trafficking organizations are composed of loosely coupled networks including legal business owners (i.e., employers, hotel owners) and even corrupted officials, this might undermine the power of deterrence and prosecution oriented strategies. Therefore, formal social control needs to be complemented by informal social control. At national level, this can be facilitated by activists and non-governmental organizations through the allocation of some of their resources for the education and mobilization of the public. Law enforcement agencies, as suggested by community policing philosophy, can also

contribute to this multi agency task of community building and organizing process, for community policing entails increasing police and government responsiveness and involves the formation of police and community partnerships in addition to crime control (McGarrell et al., 1997).

In this regard, the analysis of the distribution of human trafficking markets in Turkey complements the above argument about the relationship between structural factors and human trafficking, though these two datasets are independent from each other. An ideal approach would have multiple cities nested in these 53 countries and would model both cross-national and city level effects using multilevel analysis techniques (i.e., Hierarchical Linear Model/HLM). Unfortunately, data is not readily available at city level. Given certain limitations about sampling of the countries and measurement of independent and dependent variables across these countries, however, analysis of human trafficking in Turkey can provide an opportunity to have a closer look at the relationship between structural characteristics of the communities and the distribution of human trafficking markets in a relatively more homogeneous context, although it is almost impossible to know whether city level findings would still hold when cross-national level structural factors (i.e., poverty and urbanization) are controlled.

Additionally, human trafficking in Turkey can be regarded as representing a more specific type of human trafficking as it mainly involves foreign women who are trafficked into Turkey for the purposes of sexual exploitation and/or forced labor. Among all trafficking victims helped by IOM office in Turkey in 2006, 93 percent of the victims were trafficked for the purposes of sexual exploitation, 5 percent was trafficked for forced labor, and remaining 2 percent was exposed to both sexual and labor exploitation.

Moreover, all of these victims were females coming from the former Soviet Union countries except for two women from Iran and two women from Bulgaria (IOM, 2006).

The city level analysis of the distribution of human trafficking markets in Turkey provides stronger support for the relationship between structural characteristics of the communities and proliferation of human trafficking markets. Specifically, similar to the diffusion of illegal drug markets (Rengert, 1996), human trafficking markets generally target the cities with international borders as they are closer to the countries where the trafficked women are recruited from. Moreover, certain community characteristics such as poverty, heterogeneity, residential mobility, family disruption, and the size of the total population are also found to have significant positive relationship with the distribution of human trafficking markets as suggested by social disorganization framework. Accordingly, organized criminals in the illegal business of human trafficking mainly prefer the cities which promise higher profit with relatively lower risk of apprehension and criminal victimization. Higher profit is granted mainly by international borders which facilitate the supply of the victims and by larger populations that create higher demand or more potential customers for the services of human trafficking markets. Higher poverty, heterogeneity, residential mobility, and family disruption, on the other hand, decrease the ability of the communities to regulate and control the behavior of suppliers and consumers of human trafficking markets who are likely to be their residents and visitors.

Finally, migrant prostitution, which is considered a sign of social disorder (Skogan, 1990; Taylor, 1995), also was found to have significant positive impact on provincial distribution of human trafficking markets net for the impact of hierarchical diffusion and social disorganization. The results indicate a clear relationship at the city

level between rates of migrant prostitution, human trafficking, total crime, and organized crime. In fact, these relationships can also be reinforcing with crime and disorder attracting prostitution and human trafficking and with prostitution and trafficking reinforcing disorder, fear, and crime. Thus, in general, the results are in agreement with findings of communities and crime research literature and more specifically with the research on the distribution of illegal (drug) markets (Rengert, 1996).

In this regard, analysis of the distribution of human trafficking markets in the Turkish context extends afore mentioned argument about the relationship between certain community characteristics and the proliferation of human trafficking markets and points to potential prevention efforts.

First, since the cities with international borders, certain structural characteristics, and migrant prostitution are at higher risk for being targeted by traffickers, focusing on these cities, law enforcement officials can identify specific situations and micro places that facilitate both migrant prostitution and human trafficking and allocate resources for prevention efforts accordingly.

Second, given the fact that the cities with international borders are exploited more by human trafficking markets compared to the cities without international borders and that the victims are exclusively comprised of foreign women recruited generally from the former Soviet countries, early identification of potential victims at the border gates could considerably decrease the number of victimizations. Therefore, in addition to the need for advanced recording of individual arrival and departure information by law enforcement officials at the border gates, more research on the individual characteristics of the victims

that could serve to the early identification purposes of law enforcement authorities at the international borders is warranted.

Third, in addition to the cities with international borders, the cities with more population, poverty, heterogeneity, mobility, and family disruption are found to be exploited more by human trafficking markets as these antecedents of community social disorganization might decrease the ability of the cities to confront the establishment of human trafficking markets. Going back to the discussion of systemic control model (Bursik & Grasmick, 1993) provided in the chapter two, community social disorganization calls for the reinforcement of primary, parochial, and public level control in the community. In other words, prevention of human trafficking goes beyond solely enacting and implementing human trafficking regulations but asks for a comprehensive response to the problem. Thus, analysis of the distribution of human trafficking markets also lends support for the importance of community policing movement as a potential policy implication. In addition to crime control, the goals of community policing strategies include diagnosing and managing problems in the community; increasing police and government responsiveness; and building police and community partnerships to address the issues of crime and disorder (McGarrell et al., 1997; Thurman, Zhao, and Giomazzi, 2001; Trojanowicz, Kappeler, and Gaines, 1998; Zhao, Scheider, and Thurman, 2002).

The forth implication of this study is based on the finding that among the cities with international borders and social disorganization those reporting more migrant prostitution have significantly more human trafficking, total (public order) crime, and organized crime. In line with the community policing philosophy, law enforcement focus

on the cities with migrant prostitution is likely to expedite the diagnosis of underlying physical, social, and environmental problems that lead to more prostitution, human trafficking, and other serious crimes. Consequently, a problem oriented approach which prioritizes the control of opportunities (Green, 1996; Mazerolle and Ransley, 2006) that create migrant prostitution, human trafficking, public order crime, and organized crime is supported as well. In this regard, to increase police and government responsiveness, problem oriented policing offers a variety of problem solving strategies including formal and informal interventions that range from the allocation of necessary resources and implementation of criminal and civil laws to collaboration with place managers and owners as well as the mobilization of the local residents (Goldstein, 1990; Mazerolle and Ransley, 2006). Targeting all parts involved in migrant prostitution and human trafficking including the prostitutes, clients, traffickers, and the owners and managers of the places that facilitate migrant prostitution and human trafficking can be considered as potential implications. Considering the fact that human trafficking is believed to be perpetrated by a large number of loosely connected crime groups (which makes the detection and prosecution relatively difficult), exposing the clients to publicity or notifying those who have influence on clients' conduct; enforcing zoning, nuisance abatement, and business license regulations against properties used for prostitution; and redeveloping the area economy can help the community to better address the problems of migrant prostitution and human trafficking[13]. More importantly, all these and other interventions targeting migrant prostitution and human trafficking must have available social services to help the prostitutes and trafficked victims. In fact, activists and

[13] See www.copcenter.org for a detailed list of possible interventions suggested to tackle the problem of street prostitution.

nongovernmental organizations helping trafficking victims could also consider helping migrant prostitutes to quit prostitution given the significant relationship between migrant prostitution and human trafficking[14].

A potential response in a given city, however, should be based on a reliable analysis of prostitution and human trafficking problems in that specific city and the effectiveness of potential responses could be measurable at the end of the intervention process. Put differently, before any intervention takes places, as mentioned, each city should locate specific micro places, situations, or the copping zones (Skogan, 1990, 30) that produce migrant prostitution and human trafficking to be able to identify underlying physical, social and economic problems in the community. However, almost all of afore mentioned potential responses would require money, resources, and changes in the local community environment and it will be difficult to prevent migrant prostitution, human trafficking, or any other problem of crime and disorder without community support. This, on the other hand, leads the discussion into the third strategy of community policing that involves building police and community partnerships to address the issues of crime and disorder. Specifically, law enforcement would definitely need community support and participation to insure legitimacy and allocate resources for such comprehensive intervention strategies. At the same time, police officials become 'problem managers' (Green, 1996; Mazerolle and Ransley, 2006; McGarrell, Giacomazzi, and Thurman, 1999) by cooperating with the community and leading them into the right direction while tackling the issues of crime and disorder. Communities and crime research literature has

[14] Even though the present study reveals a significant relationship between migrant prostitution and human trafficking at city level, more incidents of human trafficking and other serious crimes in the cities with migrant prostitution put prostituting women at higher risk of victimization.

already pointed to successful results in terms of the prevention of disorder, including both drugs and prostitution (Eck, 1995; McGarrell et al., 1999; Weisburd et al., 2006;) and also demonstrated diffusion of the crime control benefits without displacement (Braga et al., 1999; Weisburd and Green, 1995). As for human trafficking, as Bales and Lize (2005) argued, neighborhood watch projects can also be promising for the prevention of human trafficking incidents, especially in the cities where the exploitation of women takes place in private homes through the network solutions (Eck, 1995).

Finally, concentration of migrant prostitution, human trafficking, and other serious crimes in certain cities and significant positive impact of migrant prostitution on provincial distribution of human trafficking, total crime, and organized crime in Turkey suggests formal and informal control of (migrant) prostitution. This, on the other hand, contrasts with radical feminist arguments rejecting a dual (volunteered/forced) conceptualization of prostitution in the name of emancipation of the prostituting women as free sex workers (Doezema, 1998; Chapkis, 1997; Kempadoo and Doezema, 1998; Naggle, 1997;). However, in addition to findings of foregoing analyses, several other empirical findings supporting an existing link between prostitution and prevailing tolerance for prostitution (Cohen, 1980) and suggesting an association between migrant prostitution and human trafficking (Davis, 2000; Ekberg, 2004; Farley and Barkan, 1998; Hughes, 2002; Schauer and Wheaton, 2006; Thukral, 2005) concur that formal control of prostitution can contribute to community based efforts by indicating an existing political will and determination reflected in the formal intervention of law enforcement officials (also see McGarrell, Giacomazzi, and Thurman, 1997; and Silver and Miller, 2004 for a positive relationship between satisfaction with police services and informal social

control). As for the relationship between prostitution and human trafficking, when prostitution is legal, Hughes and Denisova (2001) argued, the dilemma of voluntary versus forced prostitution creates problems in terms of prosecution of the traffickers as law enforcement is expected to prove that the women did not consent. Once again, for all afore mentioned formal and informal interventions to work in the expected direction, law enforcement authorities and cooperating communities would need to have available social services that they could offer to the (migrant) women to quit prostitution.

3. Limitations and Future Research

Although the findings are generally consistent with theoretical predictions and specified hypotheses, conclusions must be drawn cautiously because of several methodological issues raised in the course of this research. Measurement of independent variables and sampling strategy were two major concerns in cross-national analysis of human trafficking. Measurement of human trafficking, the problem of causal order, and unit of analyses used in the analysis of provincial distribution of human trafficking markets in Turkey were three other issues that require consideration.

In cross-national analysis of human trafficking markets, first, the measures of independent variables, specifically the measures of heterogeneity and residential mobility were rather crude. Even though better operationalization of these two explanatory variables is available in previous research, using more adequate measures further decreases the sample size, for specific information about other necessary explanatory variables is not available for every country. This also relates to the second limitation of cross-national analysis in that the selection of countries for cross-national analysis of human trafficking markets is also limited by available information about explanatory

variables. Although the measurement of human trafficking, the dependent variable, provided by Bales (2005) was available for 111 different countries, the necessary information about explanatory variables was only available for 53 countries included in the final sample. Thus, any other factor that might have compounded the selection process might also have influenced the results of cross-national analysis of human trafficking markets. Therefore, given that the representativeness of the sample is problematic, firm conclusions should better await until replication of these results with larger sample of countries and with more adequate measures of heterogeneity and residential mobility.

As far as the analysis of human trafficking markets in Turkey is concerned, it is quite difficult to specify temporal order of variables which is the major problem with cross-sectional research. Moreover, the communities and crime research literature points to the reciprocal relationship between disorder and crime, for they are considered not only as the outcomes of the process of neighborhood disorganization, but also as an integral part of that process (Bursik and Grasmick, 1993, 313). Accordingly, the significant impact of migrant prostitution on the distribution of human trafficking markets and other serious crime does not necessarily prove a casual link between migrant prostitution and human trafficking and serious crime. Although the measure of migrant prostitution precedes the measures of human trafficking and serious crime in time (2003 vs. 2006 and 2005), the relationship between migrant prostitution and human trafficking and serious crime may be more complex. To be more specific, a feedback-loop arrangement could exist where migrant prostitution, human trafficking, and serious crime

are mutually reinforcing (Skogan, 1990). Therefore, more research on the causal order of these relationships is warranted.

Measurement of human trafficking and migrant prostitution in Turkey emerges as another challenge for future researchers. The discrepancy between two different measures of human trafficking, that is, human trafficking incidents reported by police (incidents take place in 23 cities) and calls for rescue reported by the IOM office in Turkey (calls for rescue come from 36 cities) already underlines the fact that the measurement of human trafficking is under-reported in these data. Although this is true for all crime data, 157 helpline statistics (IOM, 2006) also demonstrate that it is particularly so for human trafficking where victims are unlikely to report to the authorities. The IOM office in Turkey (2006) reported that only 19 percent of calls for rescue were made by the victims themselves whereas remaining 81 percent of calls were placed by others including friends, customers, relatives, and neighbors of the victims. In this regard, even though calls for rescue might be considered more adequate representation of human trafficking in a city, different reporting and/or recording practices across 81 cities still remain as a possible threat to the patterns observed in the results. Thus, an extension of this research should consider alternative measurement of the distribution of migrant prostitution and human trafficking markets by either looking for different (i.e., self reported or perceived) measures or combining available (secondary) measures from various institutions into a single construct. To illustrate, in addition to the number of deported women, public health records about provincial distribution of STDs might help to measure overall demand for sexual services in a city.

For the unit of analysis, even though the present research looks at the relationship between the distribution of human trafficking markets and community characteristics at the city level, the communities and crime literature suggests that the real variation in terms of structural characteristics, crime, disorder, fear, and formal and informal social control is at the neighborhood level (Bursik and Grasmick, 1993; Sampson, 2002; Taylor, 2000). Hence, future research should move to the neighborhood and block level of analysis to truly test the relationship between disorder, crime, and human trafficking. This could also help identifying micro places and situations that contribute to establishment and proliferation of human trafficking markets as well.

Finally, culture and country specific factors also need to be considered in Turkey where the people live in a society with a blend of Islam and secularism. Turkey has a strong tradition of family and community lives and thus individual behavior is subject to relatively higher social control exercised by family, friends, and religion. Accordingly, foreigner women who are involved in prostitution are viewed as ''threats to family sanctity'' especially by women and this also leads to stress between wives and husbands (Gulcur and Ilkkaracan, 2003). On the other hand, brothel prostitution is legal only for Turkish women and regulated by the government. Consequently, such social and legal restrictions surrounding migrant prostitution might have also contributed to women trafficking in Turkey as the foreigner women involved in prostitution are devoid of both formal and informal protection. In fact, brothel prostitution might be another factor that contributes to human trafficking in Turkey. Simply put, as in the example of the state of Victoria, Australia (Sullivan and Jeffreys, 2002) mentioned in chapter three, legal prostitution might drive trafficking in women to meet increased demand within

expanding and profitable sex industry and this remains another important question for further research on human trafficking in Turkey.

Afore mentioned methodological reservations aside, the current study has demonstrated that communities and crime research literature has applicability to the global and local issue of human trafficking, although it has been developed in the western context and employed for the study of crime other than human trafficking so far. In this regard, this study marks a significant shift in the study of human trafficking, which has almost exclusively focused on individual characteristics of trafficking victims without a systematic consideration of structural factors in which these individuals were recruited or exploited.

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